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EDITORIAL COMMENT

The Lease-Lend Bill and Hyde Park Agreement

The Lend-Lease Bill recently passed in the United States is of special interest to farmers in Canada. This Bill provides seven billion dollars for furnishing munitions and food to all the countries resisting aggression.

The first point in regard to this bill was the need for it. That need had two sides. One was the dire need of supplies by those resisting aggression; the other was the need of securing an outlet for surpluses including food products. The cash and carry basis worked while American securities held by investors overseas could be sold, and gold could be shipped to the United States. When these resources failed to provide sufficient funds the cash and carry basis was superseded by one of take-it-to-them on a deferred payment plan. The Lease-Lend Bill was the result.

The development of this necessary policy together with the arrangement made since at Hyde Park may be expected to have important influences. Already some of them are apparent. One thing may be counted on. This is a coordination of effort between Canada and the United States in the supply of ships, planes, raw materials and food on a deferred payment plan.

The great advantage that may come from this development is a greater degree of harmony, less overlapping and greater achievement in reaching the common aim. This may come about by each country doing what it is best fitted for.

The proportion of the huge sum that may be used for providing food alarmed some people. Naturally any increase in competition in supplying food to the restricted European market is viewed with alarm in Canada. Such alarm was needless. The increase in purchasing power in the United States, made possible only by the Lend-Lease Bill, will more than make up for any loss that may occur in shipment overseas of Canadian surpluses of farm products. On account of the Battle of the Atlantic the overseas market, though small in total requirements of farm products, has recently become to a great extent Canadian. This fight is becoming more and more a farmer's fight; a fight for freedom of markets as well as a fight for freedom in other ways. The war must be won, otherwise many farms, both in Canada and the United States, will have to cut down output.

Efficiency

It is not always the farmer who benefits most from adopting "efficient" methods. A saving may be passed on to transportation companies, distributors, and other middlemen, and to the consumer in the form of cheaper food, but the farmer himself may have derived little profit. It may be answered that this is due, in part, to a system of distribution and marketing that the farmers can alter, if they will, to their own advantage. At any rate, it is not an argument in favour of out-worn or out-of-date methods. We cannot create a more prosperous agriculture on the basis of inefficiency. It seems hardly necessary to say that good production practices, ensuring an adequate supply of quality products, are the foundation of any satisfactory marketing. Lack of capital is a genuine handicap to better farming. But so long as any farmers use poor seed, grow unsuitable varieties, or employ wasteful methods, there is still room for improvement. Price is important, but so is a decreased cost of production important, and this can result only by following up-to-date methods.

Selling Produce on Retail Public Markets

by Wilbert C. Hopper

Marketing Service, Economics Division, Dominion Department of Agriculture.

MOST OF the cities in the Province of Quebec have public markets. In some of these cities the public market is a very old institution which has served the producers and consumers for many years.

The public market provides a means whereby all grades of produce can be sold at prices based on quality and condition. Transactions are for cash. There are no losses from bad accounts or inconvenience because of delayed payments.

The public market stimulates the local producer to grow larger quantities and greater varieties of produce wanted by the city consumer thereby assuring the city an abundant supply of fresh fruits and vegetables in season. Without locally-grown produce, the consumer would be obliged to pay a freight charge on all such foods which he uses in his home, thus adding to his costs of living. The consumer also gains in quality and freshness when such perishable foods are grown locally. Better quality of food and lower living costs mean better living conditions.

Millions of dollars worth of farm produce is sold every year on city retail markets by producers direct to consumers. Why do city people like to buy on a market rather than at retail stores? There are probably two main reasons and possibly two or more minor ones. The first major one, I believe, is that they hope to obtain certain of their food requirements a little cheaper at the public market than they do at retail stores. The second major reason is because they believe the produce sold on the market is fresher than it is at the store and they have a wider choice. The other two reasons are less important for the majority of buyers but quite important for a few. One of these minor reasons is habit. In some cities it has become a regular custom amongst many families to go to the public market for fresh

fruits and vegetables, for eggs and poultry and for flowers. The other minor reason is because city people, many of whom were born and raised in the country, like to go to the public market to see the display of produce.

If producers wish to retain their customers at the public market they must keep before them the two principal reasons why city householders buy at the market. If producers made a practice of charging as high or a higher price for the same grade of produce as retail stores they would lose many of their customers. Fresh, well-graded produce attracts customers. This does not mean that only high-grade produce should be sold. There are buyers for all grades. But the high-grade stuff should be placed in separate containers from the low-grade if this can be done at a reasonable cost. All farmers are interested in getting the largest number of dollars they can from the produce they grow and that part of produce which is lower in grade but still fit for food will usually find a ready sale on a public market.

Who Buys on the Public Market?

Surveys have shown that householders of all income groups buy on public markets. Generally speaking, there is a larger percentage of the low-income consumers buying on public retail markets than of the medium and high-income householders. In some cities it has been a practice for many years for the highest income householders to buy regularly on the public market. One can sometimes see expensive motor cars driven by chauffeurs waiting in the parking area to carry home the fresh produce selected by the women shoppers of such families.

The buying of produce by city people who drive motor cars has been discouraged in recent years because of the lack of adequate parking space for these buyers' cars. The widespread knowledge of the value of fruits and vegetables in the diet has greatly increased the demand for such commodities and it has become profitable for producers to expand their acreage of these products. This increase in supply has caused considerable congestion in many city markets and the space which was formerly used by buyers is now rented to sellers. Very few, if any, of our retail city markets have enough space for the buyers' vehicles and markets cannot be operated without customers.

When provision is being made for the creation of new city retail markets the importance of adequate parking space for the buyers must be given full consideration. Some markets can be increased in size on their present locations.

The Customer Must Be Satisfied.

Those who sell produce on retail markets must be constantly trying to get the consumer's viewpoint. That is to say, growers should be experimenting with different sized containers, different sizes of bunches and different types of



containers. The grower must always be honest with his customers. Repeat business helps greatly to increase sales and the seller must be ready at all times to adjust any sale if the buyer complains. He should be ready, if necessary, to return the buyer's money if he is not satisfied with his purchase of vegetables, eggs, fruit, or whatever the commodity sold. "The customer is always right" in all good retail stores and the farmer who sells on a retail market is doing a business which is quite similar in many respects to a small retail storekeeper. The seller who faces a package with good apples, good cherries, or good tomatoes and puts low-quality products into the rest of the package may make one sale but he will never make another to that particular buyer.

Those who sell on retail markets should be clean, attentive and courteous to buyers. When the customer makes a selection, the salesman should see that the order is attended to quickly. Only clean paper or bags or other containers should, of course, be used.

One reason given recently by a city housewife as to why she did not buy at the local retail market was that it was dirty at the market. Sellers should try to keep their produce and the display space clean and attractive.

'And Let the Rest Go . . .'

"Do what you can and let the rest go", was the conclusion of two farmers as they sat on their grain bags waiting their turn at the mill. Their comments on costs and prices and the general farm situation followed a familiar line . . .

"Feed is too high. With corn at one ninety a bag, laying mash at two-forty a hundred and eggs only nineteen cents a dozen—you can't make anything on that!"

"And nothing for pork!"

"And labour,—you can't get 'em even at a dollar and half, two dollars a day."

"Lots of people think the farmer is lucky. He has his milk and butter and eggs and vegetables and meat — and a house to live in . . . They don't cost anything! . . . They don't figure how long he has to work for it."

In spite of the complaining tone their talk was cheerful enough as they sat there in well-worn overalls and patched coats. They were men who enjoyed their life with all its problems and long hours of work. But underneath the cheerfulness was a real dissatisfaction that at this critical time of the year they could not get help to do the necessary work of the farm. Not only the chance of making a living but the more important opportunity of contributing all they could to the feeding of Britain seemed to be denied them. They were men of spirit caught in the grip of circumstances that didn't make sense.

Their final gesture of resignation left me sad.

"Do what you can and let the rest go. What else can you do?"



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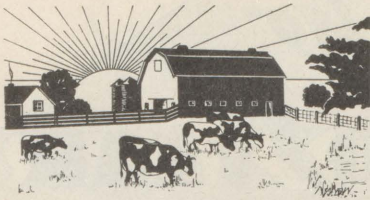


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AGRICULTURE

Articles on problems of the farm

Machinery Can Help Solve the Farm Labour Problem

by L. G. Heimpel

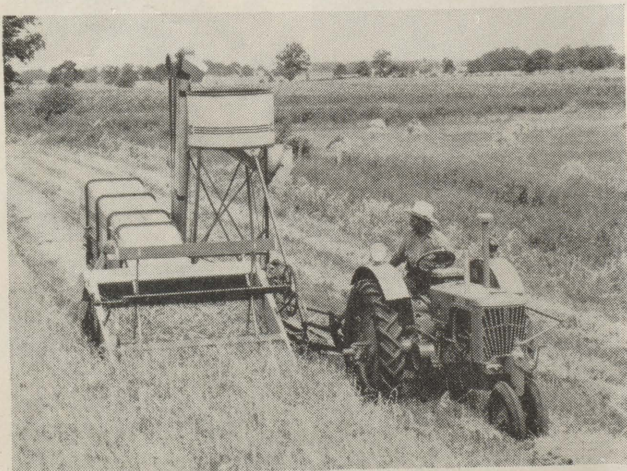
EVER SINCE the earliest history of farming on this continent the farm help problem has presented serious difficulties to this industry. Throughout the whole of its rather short history — for we are still a young continent — farming has been competing with other industries and occupations which could pay labor higher wages than could the farmer. The result always has been the same — when the railroad builder, the road builder or the factory wanted help it was hired at wages that would attract the men and the farmer had to do with what was left. And, when it was not a case of this kind of competition, there was the occasional war which always took its quota of farm workers. Most Canadian farmers now in the business remember very well the influence of the first World War on the help problem and now they are into another similar circumstance.

The very first time the farm labor problem turned up the American farmer turned to machinery. It was not an accident, for instance, that the reaper was invented in 1833. On the contrary, it was clearly a case of necessity being the mother of invention. Harvesting was always the neck of the bottle of farming, and, when limited to hand methods of harvesting, a farmer could not produce sufficient surplus food products to feed the people of the fast growing cities at the beginning of the 19th century. Though perhaps not commonly known, it is a matter of record that there were serious food shortages in New England cities early in the 19th century. The opening of the corn belt states to settlers and the development of harvesting machinery, which pro-

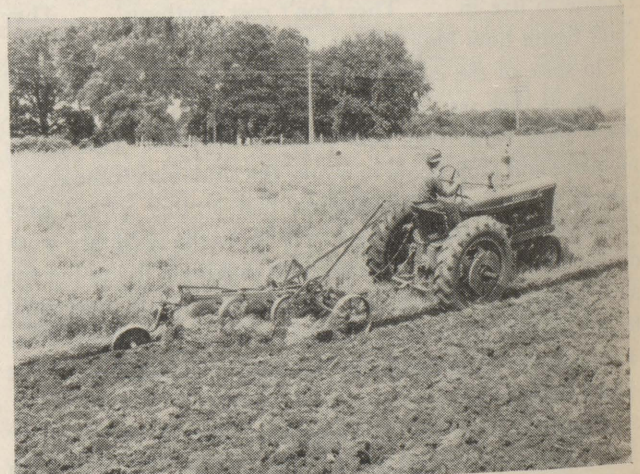
vided the incentive to larger capacity tillage machinery, speedily changed all this, however. Not only was there no longer danger of food shortage in America, but the continent soon earned the name of "the world's bread basket".

Adjustments Necessary In Eastern Canadian Farming

While the need for increased food production in this war does not at present seem apparent, there is a likelihood that enlistment in the various war services, enforced military training and the demand for labor in the manufacture of war materials will cause a more serious labor shortage than existed in the World War. Farmers must, therefore, plan to solve this problem in the best way possible. Fortunately there has been great improvement in farm tractors since the World War. While tractors were used effectively in the World War in increasing food production, they were heavy, slow moving machines not nearly so well adapted to Eastern Canadian farms as is the present day tractor. The present day farm tractor is a small machine in comparison, requiring a much smaller investment in its purchase, yet, because it is mounted on rubber tires and because of improved design, it will do as much work per day as could the tractor of twenty years ago, even though the latter was twice as heavy and cost nearly twice as much. Farmers are quick to recognize the advantages of the small tractor and thousands of these machines have been sold during the last few years. There are indications at present



The small combine in Eastern Canada seems here to stay.



Plowing is still the big tillage job on our farms.

that the supply of small tractors will be considerably smaller than the demand this year.

The cost of the small tractor today is in the neighborhood of \$750 to \$800. It is likely that new machinery to go with it will cost an additional \$400. A large portion of the cost of operation of this equipment consists of depreciation and interest on the investment and these charges will be about the same whether the machinery is used one hundred hours per year or four hundred hours. Studies of tractor costs under actual farm use have shown that where the machine is not used more than two hundred hours per year the cost per hour of operation is about twice what it is when there are four hundred hours of work for it per year. These machines are such gluttons for work that even where they do practically all the field work it takes a larger farm than the typical 100 acre establishment to provide a tractor with as much as four hundred hours of work per year. One of the first adjustments that many farmers should make, when purchasing a tractor, therefore, is to increase the area under crop. Such adjustment usually is an all-round improvement because it increases the gross production of the farm as well as providing a larger amount of profitable work for the new machinery. Since such increased production will have to be made without any increase in labor force there will also be increased labor efficiency, which in itself is always a fundamental improvement.

There are, of course, thousands of Eastern Canadian farms with ample crop acreage to employ tractors profitably. These are the farms, in fact, on which tractors can be of greatest assistance during this war. The very pronounced reduction of man-hours needed for the normal field operations of such farms not only makes it possible for the operator to get along with less help but will increase labor efficiency on the farm as well as profits.

Where it is necessary to increase the tillable area for profitable use of tractor power this is often possible through the renting of a neighboring farm or a part of it. Time was when there was a clear-cut limit as to the distance that was permissible between the home farm and such rented farms worked in conjunction with the home place, a fact due to lost time on the road with horses; the tractor now is a fast machine, however, thus decidedly increasing the radius of operation of the enterprising farmer. One tractor farmer in western Ontario, for instance, a few years ago had an opportunity to rent a block of 90 acres of good crop land at a distance of more than a mile from his farm. With a rubber tired tractor having a 15 mile an hour road gear profitable operation of this land became easily possible, while with horses it was not to be thought of. This farmer grew a cash crop of 75 acres of fall wheat on the rented farm, all in one block, two years ago.

Timeliness Important Factor

It does not take much experience to convince farm operators that timeliness is exceedingly important in farm-

(Continued on page 11)

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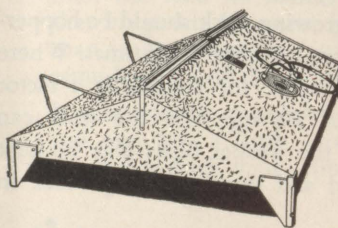
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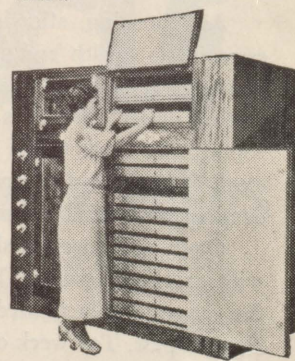
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Summer Management of the Growing Stock

by W. A. Maw

CONTINUAL normal growth in the young stock is essential during the summer months, if the pullets are to be in readiness to lay by early fall and the cockerels to be finished as meat or mature breeding males. The essential factors for normal development are: first, proper feeding, with sufficient protein in the ration for bone and flesh development; second, roomy quarters in housing to avoid unnecessary crowding at night; third, clean range conditions supplying green foods.

Feeding

Whether feeding by the all-mash system or the grain-plus-mash system, the one essential is to have the protein balance in the ration properly fixed. Stock at the ten- to twelve-week stage will soon show the result of a lack of protein by an unthrifty condition in flesh and feathers, as well as in leg colour. Animal proteins such as milk or beefscraps, especially milk, will very soon correct the apparent check in development. Milk as a drink, along with a ration carrying from five to ten per cent beefscraps, will keep the birds in smooth feather and steady growth. A check in growth at this stage will be detrimental to final development and production. Pullets should come into laying condition large in body and well-fleshed.

Grain and mash fed to growing stock should be hopped, in order that the stock get sufficient at all times. Where this system is used, hopper space for feeding is a factor demanding proper attention. Be sure that the stock can feed without crowding, as the weaker birds may be kept from getting sufficient food and thereby be kept back in development.

Housing

Airy housing, allowing roosting space for all stock, is essential to health and good growth. It is quite often necessary to train the birds to go to roost by placing wire netting under the roosts and forward to the floor, thereby forcing the stock to go up to the roosts. In this way, the stock is kept from sleeping among their droppings or becoming overheated by crowding into a corner on the floor.

Open-air houses or shelters are often used on the range with excellent results. The housing of growing chickens on the range is only needed for protection after the brooding stage is past. Ten-week-old chickens, in the month of June, will thrive if housed only in what are termed range shelters. The range shelter is merely the frame of a low-set house with a roof for protection against rain and wind, the sides and floor being covered with wire netting. The netting is used to allow for the catching of the chickens or to prevent predatory animals getting to them. The roof is covered with two-inch mesh wire with tar-paper over the wire.

The type of shelter used may differ, one being the shed-roof style and another the double-pitch style. The shed-roof type calls for protection on at least one side and the

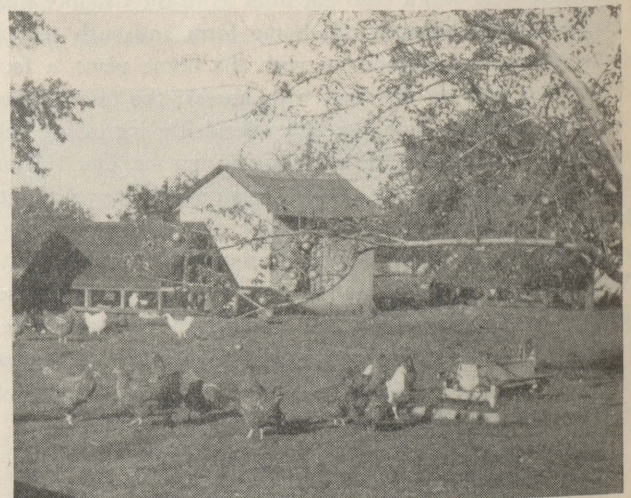
end, whereas the double-pitch type can be so arranged that the over-hang of the roof comes below the roost level, thereby protecting the birds from the wind, providing the house is set with the roof side towards the prevailing winds.

The advantage of the shelter for range stock is that the birds are comfortable at nights. They go into the open house freely and roost rather than sitting on the floor close to the entrance, as is often noted in the closed brooder house. In the early season it is advisable to enclose the north end and at least one side with cotton or burlap bagging until the birds are hardened to the open air conditions and are roosting well.

Size of Shelter

The size of the shelter used may vary, but the most suitable size is that which can be moved easily by hand or shifted on skids with one horse. If the house is built on two skids, it may be necessary to place a board around the bottom to prevent the chickens getting under the house. In some plans, the house floor is built separately, thus allowing for the superstructure to be moved off and the floor to be easily moved for cleaning.

Since the droppings go through the floor mesh, it is suggested that sand or lime waste, or some such material, be spread on the ground to assist in absorbing the moisture from the droppings, as well as making it easier to scrape them up. They should be removed at least every two weeks. If the house is moved to a new place, cover the old area with lime or anything else being used for the purpose. Do not move the house very far from the old spot, if it is to be in the same field, since the stock may not return to the house but go instead to the old area and sleep on the ground. A good policy is to start the houses on one side of a field and gradually shift across the field to the other side.



Young stock on a good grass range with ample shade. A range shelter and colony brooder house take care of the original group of 300 chicks started under one brooder stove.

In locating the houses it is advisable to provide for shade if possible. Trees are best, but if not close at hand corn or some other crop may be planted. The water troughs should be placed in a shady spot or on the shaded side of the house. Feed hoppers can be located a short distance from the houses. This is advisable to avoid too much congregating of stock immediately surrounding the houses. Avoid soil contamination by overcrowding in small areas.

The shelter provides the most satisfactory range house accommodation at a very small cost. Since the original lot of chicks started in a colony brooder house will need double the housing space during growth, one range house for each brooder house makes an economical housing arrangement.

Range and Green Foods

Well-cultivated range growing a green crop is one of the more simple ways of controlling disease or parasitic infections, and, at the same time, supplying essential foods for normal growth and good skin and leg colour, which are an indication of health.

If possible, summer ranges should be alternated from year to year and the houses moved on the range occasionally to avoid soil contamination and unclean feeding range. Thorough cultivation of range-land by summer fallowing for the early season will tend to destroy many of the parasitic eggs or larvae if present. Summer cropping, following the fallow, also cleans up the soil and provides a green crop for the following spring.

Careful attention to the growing stock is well repaid in good growth and development and these are the essentials to future production and reproduction in our flocks.

BILL OF MATERIALS FOR A 100 — BIRD RANGE SHELTER

	No. of P'cs	Size	Length
Studs and corners	4	2" x 3"	2 ft. 6 ins.
Sides	2	2" x 3"	2 ft. 0 ins.
Sills and sides	2	1" x 5"	8 ft. 6 ins.
Ends	2	1" x 5"	7 ft. 0 ins.
Cross Tie	1	1" x 5"	7 ft. 0 ins.
Ridge and Eaves	3	1" x 3"	10 ft. 0 ins.
Rafters	20	1" x 3"	5 ft. 10 ins.
Roof Supports	2	1" x 3"	5 ft. 2 ins.
Door Studs	2	1" x 3"	2 ft. 6 ins.
Roosts	7	2" x 2"	8 ft. 6 ins.
Brackets	2	1" x 3"	7 ft. 0 ins.
Wire Supports (floor)	5	1" x 3"	7 ft. 0 ins.
Board Walk	1	1' x 10'	8 ft. 6 ins.

POULTRY NETTING:

Ends, Flooring, Sides, 28 yds., 2 ft. wide 1" mesh.

Under Roofing, 14 yds., 3 ft. wide, 2" mesh.

(NOTE:—If ½ in. insulating board is preferred to roll roofing, netting under roof is not necessary.)

The capacity of this shelter may be increased to 150 birds by building it 12 ft. long instead of 8 ft. 6 ins. In this case an additional post will be needed in each side wall, with cross tie under roost bars.

Though minerals, vitamins, and balanced rations have their part in swine husbandry, they will not take the place of comfortable quarters and dry bedding.



Just think
of it
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TELLS A TRUE STORY ABOUT A DAIRY HERD

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Now, Miracle Dairy Feed costs him \$3. a ton more than the feed he formerly used. But in spite of that his profit for these four months is \$670 more than in any previous four months period with the same herd! And \$670 more profit ain't hay.

It just goes to prove what I have always said — you may pay a little extra for Miracle Feeds but you get it back many times over in extra profits."

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IF IT'S "OGILVIE" — IT'S GOOD!

Grass Silage

by L. C. Raymond

UNDER THE most efficient hay-making conditions it is recognized that there is a dry matter loss of from 10-15%, while this loss may be many times greater — even resulting in complete loss of crop — where the weather is very unfavourable. The protein portion of this dry matter suffers most since, to facilitate drying, the hay crop is allowed to become too mature which results in considerable loss of leaf, where most of the protein is found. Recognizing this situation, much investigation has been directed to various other means of conserving the highest possible proportion of the nutrients in our farm grown fodder crops. Racks or tripods have long been in use in many northern European countries and tripods particularly are now used in Canada to quite an extent for such crops as alfalfa. British workers experimented with stack drying which led to the further idea of machines for immediate drying, where a high heat and a large capital outlay were involved. This artificial drying may produce a high quality product but the unavoidable overhead cost has not made it feasible on average sized farms.

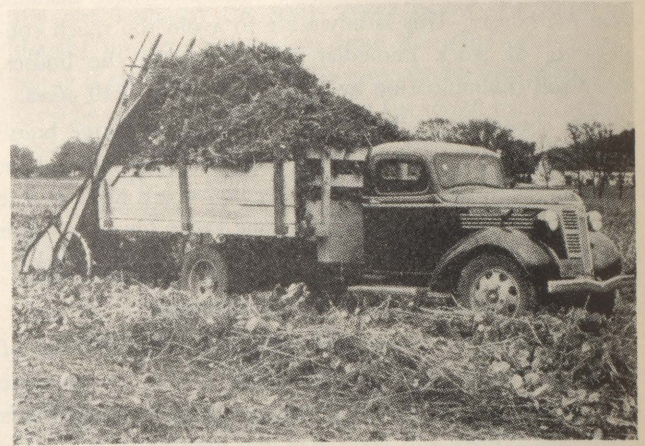
All of these methods have reduced the dry matter loss over those of ordinary hay making. They also make it possible to produce a higher-protein fodder since the cutting may be done at the right time. But fodder stored in a dry condition does deteriorate. Pasture grass and good quality fresh cut hay contain liberal quantities of carotene — the source of vitamin A. Carotene is the substance which colors June butter, and vitamin A contributes to the general health of the animal. This constituent is rapidly lost under any type of dry storage but is largely conserved under wet storage. For this reason, and also because it is less expensive than artificial drying and better adapted to the common farm units, wet storage methods for fodder conservation have received much attention during the past ten years. The product known as grass silage is becoming more and more common on this continent as well as in many other countries.

What Crops Are Used for Grass Silage?

The term grass silage is used in a general sense to cover all kinds of green forage — other than corn — which may be preserved in a silo. While grasses alone are sometimes ensiled it more often applies to a mixture of grasses and legumes (clover and alfalfas) or to a pure legume crop either red clover or alfalfa.

What Is the Essential Nature of Silage?

Natural silage can best be illustrated with the corn crop. The green fodder containing from 25-30% dry matter is cut into one-half to three-quarter inch lengths and packed tightly in a silo, usually of the tower type. Bacterial fermentation of the starches and sugars found in the plant tissues preserves it. This fermentation process results in



the formation of acids — chiefly lactic and acetic — which in a short time render the silage sufficiently acid to prevent the development of harmful bacteria which would result in decay and spoilage. Abundant bacteria are present in all green herbage but the favourable type produce their result in the absence of air — hence the need for tight packing in an air-tight silo. They must also have a liberal supply of starches and sugars (carbohydrates) in the fodder ensiled.

Grass vs. Corn for Silage

The corn plant is admirably adapted for silage making on account of the high proportion of starches and sugars which it contains. The crops used to make grass silage are not by any means as suitable in this respect. Grasses and particularly legumes and especially when they are immature, are much higher in protein and are actually deficient in the starches and sugars required to insure a good quality of silage without the addition of a preservative of some sort. Obviously this may be overcome by doing one of two things — either the acid may be added to produce the desired acidity immediately or the starch and sugar content may be supplemented. Preservatives of these two types are now being used and either one will produce satisfactory results when properly applied. Phosphoric acid — a relatively mild type — is used to supply acid direct and ordinary blackstrap feed molasses, largely a sugar, is employed to bolster the deficiency in grass tissues. Varying quantities of the preservative are required depending on the composition and maturity of the crop. Grass silage making is not by any means as fool proof as corn but has now long passed the experimental stage. The details which must be observed cannot be dealt with here owing to lack of space, but may be found in section V of the recommendations of the Provincial Pasture Committee for 1941. This publication can be obtained from most agricultural offices in the province.

Advantages and Disadvantages of Grass Silage

The advantages and disadvantages of using this method of storage may be briefly stated:

Advantages.

1. The crop may be cut at the right time, almost regardless of the weather.
2. Permits saving a higher proportion of the feeding value of the crop.
3. Saves storage space.
4. Enables an earlier start of haying thus ensuring higher quality forage and removing a bad peak in farm management.

Disadvantages.

1. Handling approximately three times the weight involved in the haying method.
2. The hay loader must be more strongly built than that adapted for dry hay.
3. Cost of the preservative.

Application.

Grass silage can never entirely replace hay but it is likely to find its place as a preservation method for those crops most difficult to save as hay. The red clover crop is a good example. The normal harvest of this crop, as hay, is usually delayed unduly for the express purpose of allowing it to reach a stage where it is easier to cure. Grass silage provides a means of handling it at the right time (in early bloom) before it has lost leaves or suffered from lodging. The proper stage is reached in most localities between June 20th and 25th. Cutting at this time gives a high quality

forage but it also provides a number of additional advantages. Early cutting ensures a much more abundant aftermath which may be used in a variety of ways. On many farms it can be used nicely to supplement failing pastures as it will reach its prime about the time that the usual drought period is so destructive to the permanent pasture. If it is not required for pasture the second crop may be cut for hay or again ensiled. This second crop will be ready in August when haying conditions are more favourable as a rule. The aftermath may also serve as a valuable cash crop if used for seed production. The early cutting is essential to ensure a good seed yield.

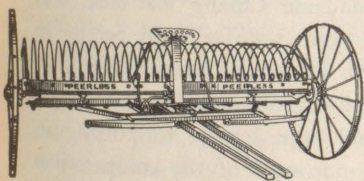
Thus grass silage, now that suitable preservatives are provided, offers considerable advantages in the crop management aspects of the farm. Both directly and indirectly it enables more complete conservation of the farm-grown fodder, besides providing elasticity in the management of the summer's work.

Forest Insects and Fire Losses

Insects and disease cause an annual loss of about 700 million cubic feet to the forests of Canada; the annual loss by fire is estimated at 325 million cubic feet of merchantable timber and a like amount for the loss of growing timber. Together with the annual cut of 2,580 million cubic feet of standing timber for domestic and industrial uses, the total annual depletion is estimated at 3,930 million cubic feet of standing timber.

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CO-OPERATION AND MARKETING

A page of interest to members of farmers' co-operatives

MARKET COMMENTS

Since our last issue appeared the Department of Agriculture of Quebec has provided a bonus of two cents per pound on cheese similar to that of Ontario mentioned last month. A contract to supply some five million dozen eggs to Britain has recently been announced. The sharp advance in the price of hogs in the United States since the passing of the Lease-Lend Bill has resulted in shipment of some eight thousand live hogs across the border in the two weeks ending April 24th.

One of the most important influences on volume of farm products coming to market is the vagaries of the weather. The length of the winter feeding period is one of most costly handicaps of the production of milk for all its various uses in eastern Canada. The winter feeding period is always long yet it varies somewhat from year to year. Any variation in the pasture period at either end of the season has a marked influence on volume of production and costs. The winter feeding period now just drawing to a close has been much shorter than that of 1939-40. This feeding period has been shortened at both ends of the season when compared with the previous winter. In the later season a fine open fall is now followed by an early spring with winter injury negligible. At the same time reports point out that potatoes from Florida and products from some other southern States may be coming north about two weeks late this season. This illustrates not only sectional variations possible but also some of the effects on markets.

Trend of Prices

	April 1940 (\$)	March 1941 (\$)	April 1941 (\$)
LIVE STOCK:			
Steers, good, per cwt.	7.45	9.37	9.25
Cows, good, per cwt.	5.63	6.40	6.60
Cows, common, per cwt.	4.26	4.55	4.70
Canners and Cutters, per cwt.	3.47	3.77	3.90
Veal, good and choice, per cwt.	7.45	12.00	8.45
Veal, common, per cwt.	5.91	9.88	6.75
Lambs, good, per cwt.	—	—	10.20
Lambs, common, per cwt. ...	8.12	8.58	7.00
Bacon, hogs, dressed, B.1, per cwt.	12.40	11.63	11.70
ANIMAL PRODUCTS:			
Butter, per pound	0.27	0.34½	0.31½
Eggs, grade A, large, per doz.	0.23	0.21½	0.22
Chickens, live, 5 lb. plus per pound	0.18½	0.20½	0.20
Chickens, dressed, milk fed. Grade A, per pound	0.21½	0.26½	0.28
FRUITS AND VEGETABLES:			
Apples, B.C. McIntosh, extra fancy, per box	2.37	1.95	1.80
Potatoes, No. 1, Quebec, per 50 lb. bag	1.10	0.55	0.55
FEED:			
Bran, per ton	27.00	27.00	26.00
Oil meal, per ton	(40%) 33.75 (32%) 33.00 (32%) 33.00		

EDUCATE FOR CO-OPERATION

The Swedish consumers co-operatives are one of the most important agencies of adult education in Sweden. It was in Sweden that there has developed to such a high degree the use of the small study circle as a means of adult education.

The consumer co-operatives in Sweden are the largest publishers of economic books in the country; they publish the most widely circulated weekly journal in Sweden; in their own college they train employees, committee men and specially selected members.

Mr. Axel Gjores, in charge of the educational organization says that it was absolutely necessary to undertake such widespread education in order to build a soundly functioning and successful democracy. "A co-operative" he says "is both a business and a school."

INDUSTRIAL CO-OPERATIVES IN CHINA

Recognizing that unless war refugees in China are enabled to be self-supporting, they will remain indefinitely a public charge, and that there is a vast need for manufactures to take the place of those stopped by the Japanese occupation of China's industrial centers, a group of far-sighted individuals in 1938 made a plan for solving both of these problems by the establishment of Industrial Co-operatives. This scheme, sponsored by the Executive Council of the Chinese Government and Dr. H. H. Kung who was then its President, and backed also by the Generalissimo's Headquarters and Madame Chiang Kai-shek, was for the training of refugees and destitute local people in industries and setting them to work on a co-operative basis with funds lent by a central organization. Within a year some 1,500 co-operatives had been set up, supporting an estimated 225,000 people, and some of the co-operatives had already paid back the loans made to them. The industrial co-operatives thus proved themselves to be a particularly efficient form of relief, for the money put into them could be used over and over again as loans were paid off.

DID YOU KNOW?

THAT in Sweden 14% of the members of consumer co-operative societies are farmers.

THAT retail sales of the British co-operative during 1939 totalled more than one billion dollars — an increase of 3.21% over the previous year.

THAT co-operative ownership is based on the right of private ownership. It stands for more widespread ownership of goods and services by the people who use them.

Machinery Can Help . . .

(Continued from page 5)

ing. It is practically always the fellows who are well ahead with their work who are most successful. But there are many things beyond the operator's control which can delay farm operations, chief of these being the weather. The faster speed of the tractor coupled with the fact that it can be kept going night and day, if necessary, easily permits farmers to keep well ahead of their work even though short-handed.

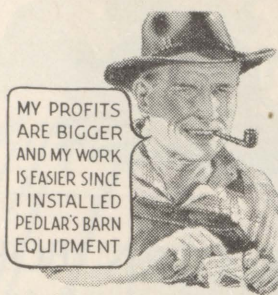
Not only is it possible to work our farms with considerably less help, but it is possible to do a better job with tractor power than was possible without it. It is necessary, of course, to be prepared for field work when the time for the different jobs arrives, and this is a part of farm management which one can not afford to neglect. The cultivator, disc harrows, drag harrows and seeder must be in good condition when they are needed and there are usually some things to be done to them, which, if left until the land is ready, will cause costly delays. The farm shop has been neglected much too long on our farms. With horses as the source of power we could perhaps "get away with it", as the saying is, but with power equipment, where timeliness must be stressed for best results, and where much more is expected from each man in the farm force, a shop and good shop equipment are really essential.

Even where a tractor is not used good management of equipment pays handsomely. Too many farms are woefully short of such things as doubletrees, for instance. Often the only doubletree available is left on some implement in the farthest field on the farm when, due to some change in plans, it is needed for another job. The result is an hour's lost time while a man walks to the back field to bring the doubletree home on his shoulder. Or, if the one and only doubletree breaks, as often happens at just the most inconvenient time, the hold-up is often a very serious matter.

Machinery Around Buildings Important

Of course, a tractor is of use only for outside haulage and belt work, and there is much more than this to do on a diversified farm. However, here again well chosen and well cared for machinery can do wonders in helping farmers through the labor shortage of war time. The milking machine, for instance, cuts the labor requirement of milking in two. And the sale of milkers has gone up in an astonishing way during the last year. One blockman covering three Eastern Ontario counties told the writer recently that in this territory alone seventy-five milking outfits were sold last year — more than the total sales of the whole branch of this firm in any previous year.

Again, size of herd being milked is a big factor in the profitable use of this machine. The milking machine begins to pay well only when a minimum of 16 cows are being milked. Twenty-two cows can be handled by the same size outfit as is needed for sixteen. Almost all machinery must be kept busy if it is to pay its way.



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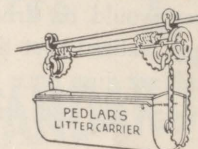
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DEPARTMENT OF AGRICULTURE

*Activities, Plans and Policies of the Quebec
Department of Agriculture*

THE CORN BORER

There was a time years ago when the familiar potato bug was unknown in Canada or, for that matter, in North America. It was first discovered in Colorado in 1823, but it was not until 1859 that any mention of damage was made, when it was found ravaging potato fields in Nebraska. In another 20 years it had spread all over the continent. The bugs were first seen in Ontario in 1870, and reached Quebec in 1877.

But the farmers at the time took energetic measures to control this pest. They realized that unless they did so, they would be driven out of potato production. Because they realized that they had to fight the insect *every year*, and not just once every now and then, the potato bug, though still with us, is more of a nuisance than a danger.

Another Enemy

We need the same kind of action today to fight the corn borer.

In 1925, only 16 years ago, there were no borers in the Province of Quebec. The millions that we have today are descendants of borers which apparently arrived in a shipment of broom corn from Italy to the United States around 1917. Energetic measures were not taken then — and we are suffering now for this lack of foresight.

We have a job on our hands — a difficult one, but not an impossible one. It is not impossible because control measures are known and are not hard to apply. It is a difficult task because carelessness on the part of one or two farmers can undo the good work of all the rest, and the big job is to see that everyone who grew corn last year burns or plows under the leaves, stalks and ears of last year's crop.

The corn borer worms spend the winter in corn rubbish. Burning destroys them. If they are not destroyed, they transform into moths which lay eggs from which hatch the worms which feed on the corn. So no matter how carefully a farmer destroys the overwintered insects in his own fields, moths from nearby fields which have not been cleaned will fly across and infest his crop. Only by concerted efforts by everyone in the community can this pest be eliminated. Shall we work together or shall we stop growing corn?

Ten "MUSTS" in Corn Borer Control

1. Make sure that your friends and neighbours realize the seriousness of the situation facing us.
2. See that everyone gets together to do something about it.

3. Plow all fields where corn was grown last year deeply, and do it early.
4. See that no corn debris, or weeds, are left uncovered.
5. Burn all remnants of last year's crop *before June 1st*.
6. Clean up all corn debris around the buildings and burn it.
7. Do not throw corn remnants on the manure pile; this doesn't kill the borers which are still in the old stalks and ears.
8. Small corn plots in cities and towns must be cleaned up also.
9. Make the clean-up a thorough one. A job like this half done might just as well not be done at all.
10. Be careful that your fires don't get out of control.

NEW DITCHING EQUIPMENT AVAILABLE

Farmers with drainage work to be done will be interested to know that the Department of Agriculture has just bought new and modern heavy equipment for this sort of work. They now have 12 heavy tractors with "bulldozers" and 29 steam shovels, which may be rented for ditching, levelling, and similar work. The rental charge for the equipment is \$12.00 per day, which includes the services of a trained operator.

In one parish of the province, St. Celestin, the soil is very fertile, but the ground is flat and hard to drain. The Department and the municipality have spent \$10,000.00 in drainage work and it is estimated that the value of the crops raised in the parish has increased in consequence by \$25,000.00. Modern equipment can accomplish a tremendous amount of work in a day, and the charge of \$12.00 per day is a very reasonable one. It is expected that many farmers and municipalities will take advantage of the assistance offered by the Department.

CHEESE PRODUCTION

Since the beginning of the year there has been a considerable increase in the amount of butter produced in Quebec, and a corresponding decrease in the production of cheese. In March, 1941, Quebec factories produced 1,054,601 pounds of butter and 77,630 pounds of cheese, which compares with 840,305 pounds of butter and 161,741 pounds of cheese in the same month of 1940. During the first three months of 1941 butter production increased 20% over the same period last year while cheese production declined 43%.

A PROVINCIAL BONUS ON CHEESE

From May 1st a bonus of 2 cents per pound will be paid on all cheese made in Quebec after that date which scores 92 or better. The producers will receive an extra 2 cents above the current market price from the wholesalers, who will in turn be reimbursed by the government.

A special form must accompany each shipment from the cheese factory, on which will be entered the date of manufacture and the weight of each cheese in the lot. These forms will be supplied by the Department of Agriculture to the cheese factories.

It is estimated that this bonusing plan will mean an extra \$650,000.00 for the Quebec cheese industry.

PROTECTIVE APPLE PACKAGES

The question of consumer packages for apples has been discussed by fruit growers for many years, but, although manufacturers of other products have changed their types of packages to meet modern conditions of living, the bulk of Canadian apples is still sold in barrels, boxes, and hampers.

During the past year, however, the Dominion Department of Agriculture, in co-operation with commercial firms, has been working towards the development of a satisfactory consumer package. As a result, market trials are being conducted with three new packages — the cellophane gallon bag, the half-bushel corrugated paper board box, and a peck of the same material. Consequent on the knowledge gained by the successful experiments of the Horticultural Division with cellophane containers for apples in storage, extensive market trials are being made of the cellophane bag. The entire package consists of a corrugated paper board carton, either waxed or unwaxed, containing four gallon bags of apples. According to the sales, it would appear that the public is willing to pay a slight increase in price, necessary for such a package, in order to be able to buy the apples in the best condition.

With regard to the half-bushel and one-peck corrugated board boxes which will be given further extensive trials evidence of satisfaction on the part of consumers is accumulating. As these packages are inexpensive, easy to pack, and protect the apples from damage, it is believed that they will assist the sales of apples.

Man and Wife wanted to look after 100 acre farm in Eastern townships — permanent position. Good wages to reliable experienced farmer. Apply Box No. 23, Macdonald College Journal, Macdonald College, Que.

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Good for a Lifetime... Sold with a 25-Year Guarantee

A GUIDE TO THE CONTROL OF COMMON D

by J. G. Coulson

A — DISEASES

BEAN ANTHRACNOSE — Circular to oval spots on pods with reddish or brown borders and centres becoming sunken and dark with age. Rusty-appearing spots on seeds. Plant seed from healthy pods. Do not work among wet plants. Use resistant varieties such as Robust, Yellow Eye, Perry Marrow, Scotia, Genesee Pea, Geneva, Well's Red Kidney, Livingston's Pencil Pod Wax, Keeney's Rustless Golden Wax, Longfellow, Black Valentine or Hopkin's Earliest Red Valentine. The first five are dry beans; the rest are snap beans.

BEAN BACTERIAL BLIGHT — On leaves, irregular watery patches with yellow borders becoming brown and papery. On pods irregularly-shaped brick-red to brownish spots or blotches. Select seed from healthy plantations. Plant a resistant variety such as Robust, Yellow Eye, Peddy Marrow, Scotia, Refugee Wax or Late Stringless Green Refugee. The last two are snap beans.

BEAN MOSAIC — Leaves mottled with light and green areas, frequently puckered and malformed. Plants often pale and stunted. Plant disease free seed selected from healthy plants. For dry beans try a resistant variety such as Robust, White Marrow, or Red Marrow. For snap beans use Idaho Refugee, Wisconsin Refugee or Refugee U.S. No. 5.

CABBAGE CLUB ROOT — Also attacks cauliflower, turnips, etc. — Dwarfed sickly plants wilting on hot days with irregular swellings on the roots. Apply lime to correct acidity. Do not use diseased plants for transplanting and practise a long rotation.

CABBAGE BLACK ROT — Yellowed blotches usually beginning at edge of leaf in which the veins are blackened. Leaves may dry up and defoliate. The head may develop a foul smelling black rot. Use clean seed or treat it with Semesan according to instructions on container. Destroy diseased plants as they appear in seedbed and field.

CELERY EARLY AND LATE BLIGHTS — Rusty or dark gray spots on leaf blades and stalks. Spray plants in seed bed when they are about 2 inches high and again a short time before transplanting to the field. Use Bordeaux mixture made of 3 lbs. of bluestone and 6 lbs. of hydrated lime in 40 gallons of water. The plants should be sprayed in the field at intervals of a week or 10 days, according to rains, with Bordeaux made of 4 lbs. of bluestone, 8 lbs. of hydrated lime and 40 gallons of water. The plants may be dusted with a 20 per cent copper-lime dust in place of spraying with Bordeaux. Rake up and burn all diseased refuse in the fall.

CELERY CRACKED STEM — Transverse browned cracks on the leaf stalks. Apply borax 15 lbs. to the acre within the rows or broadcasted at the rate of 30 lbs. to the acre.

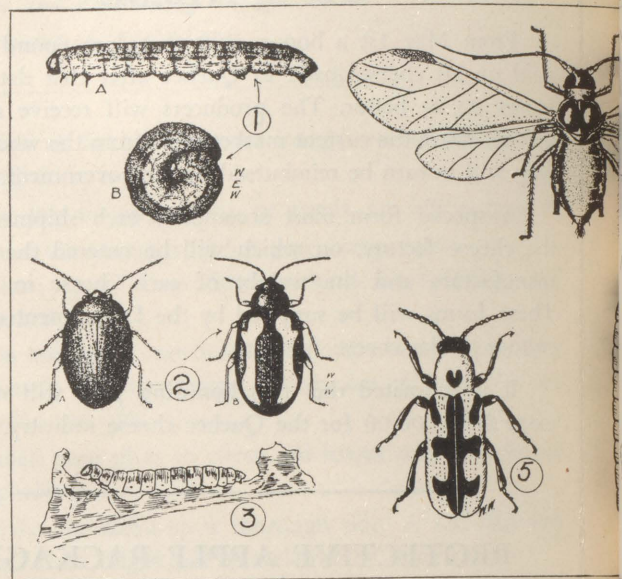
CORN SMUT — Black, sooty swellings on various parts of the plant above ground. Go through the field from time to time and collect all smut growths as they appear. Practise a 3 or 4 year crop rotation and do not use fresh manure with the corn crop.

CUCUMBER BACTERIAL WILT — Leaves suddenly wilt and dry up. Dust to control cucumber beetles which spread this disease. Pull up and destroy wilted plants as they appear.

ONION SMUT — Black dusty streaks or masses on seedlings and growing bulbs. In infected soil, plant onion sets or transplant seedlings at least 3 weeks old. Avoid planting seed in contaminated soils.

PEA WILT AND ROOT ROT — Plants pale green and stunted. Wilting of foliage or browned and decayed roots or both. Practise crop rotation using a five-year rotation if disease has been severe. Use resistant varieties as Green Admiral, Yellow Admiral, Rice's 330, Horal, Alcross, Alderman, Green Feast, Telephone, Prince of Wales, Resistant Alaska, Bruce, Senator, Ameer, Wilt Resistant Perfection or Wisconsin Early Sweet.

POTATO BLIGHTS — Well defined brown spots with concen-



tric markings on leaves or a sudden blackening, browning, and dying of leaves and vines. Reddish-brown rot of tubers in field or storage. Spray thoroughly with Bordeaux mixture containing 4 lbs. of bluestone, 6 lbs. of hydrated lime and 40 gallons of water. Make first application when plants are 6 to 8 inches high and every 10 to 14 days after in order to keep foliage well covered with spray. Add poison for beetles as required. When vines are diseased, allow them to die down and become thoroughly dry before gathering the tubers. Store tubers in a cool place.

POTATO SCAB AND RHIZOCTONIA — Scabby spots on tubers or black specks or lumps adhering to the tubers. Use clean tubers for planting or soak seed for 5 minutes in a solution containing 8 oz. of mercuric chloride, and one quart of commercial hydrochloric acid in 25 gallons of water. Spread out tubers after treatment so that they will dry quickly. Semesan Bel used according to instructions on container gives good results.

POTATO BACTERIAL WILT AND RING ROT — Rolling, yellowing, wilting and death of the foliage. A cream to light brown cheesy rot in a more or less complete ring a short distance below the skin of the tuber. Plant certified seed or seed from a healthy crop.

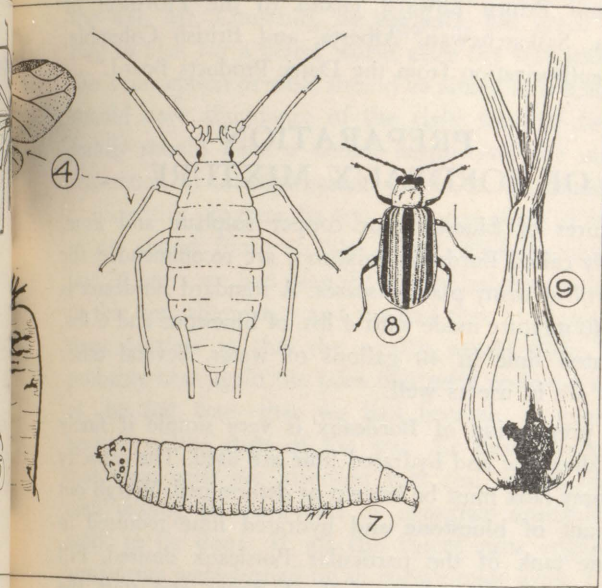
POTATO AND TOMATO VIRUS DISEASES — A number of derangements including mottling, yellowing, ruffling, crinkling and rolling of the leaves. Plants frequently stunted and yields often much reduced. Use certified seed potatoes. Do not transplant diseased plants. Avoid handling healthy plants after touching diseased ones. Rogue out and burn diseased plants. Keep down weeds. Avoid use of tobacco while working among tomatoes, particularly while the plants are young.

TOMATO BLIGHT AND LEAF SPOTS — Grayish-brown to brown spots of various shapes and sizes on leaves and stems, which may result in defoliation. Rotten areas on fruits. Spray plants when they are about 3 weeks old and again about a week before setting out into field. This should control these troubles in early varieties. For late tomatoes spray them a few days after they have been set out and about 10 days or 2 weeks later. Use for all sprays, Bordeaux, 3 lbs. of bluestone and 6 lbs. of hydrated lime in 40 gallons of water. The plants may be dusted with a 20 per cent copper-lime dust if preferred. Grow the more resistant varieties like Marglobe, Break-o'-Day and Marhio.

TURNIP BROWN HEART — Grayish-brown discolouration of the internal tissues. Control same as for celery cracked stem.

PLANTS AND INSECTS ATTACKING VEGETABLES

W. E. Whitehead



B — INSECT PESTS

(Numbers correspond to accompanying illustrations.)

1. **CUTWORMS** — Cut off plants at ground level. Mix 5 ozs. of Paris green with 1 peck of bran; add 1 pint of molasses and sufficient water to moisten mixture. Stir well. Sprinkle thinly about plants or along rows in late afternoon or evening.

2. **FLEA BEETLES** — Small dark-coloured jumping beetles that eat holes in leaves of potatoes, turnips, etc. Bordeaux mixture repels all species. Or, dust with lead arsenate, 15 parts mixed with slaked lime, 85 parts. Apply when leaves are wet with dew.

3. **CABBAGE WORM** — Develops from eggs laid by the common white butterfly. The "worms" attack cabbage, cauliflower, turnips, etc. Dust with arsenate of lead, 1 part to 5 parts of hydrated lime. Arsenate of lime or Paris green may be substituted, in which case, dilute the former with 8 parts of hydrated lime and the latter with 10 parts.

4. **APHIDS OR PLANT LICE** — Small, soft-bodied, sucking insects, green, red, or black in colour. Found on the stems and leaves of various crops, restricting growth and frequently causing curling and deformation of the leaves. Aphids *do not* eat the plant, but suck the sap. As soon as the infestation is discovered, spray with nicotine sulphate ("Black Leaf 40") at the rate of 6 oz. to 40 gallons of water in which have been dissolved 2 lbs. of laundry soap. For small amounts this works out to about 1 teaspoonful to 1 gallon of water. Wet all parts of the plants, especially the underside of the leaves. Insects *must be covered* with spray.

5. **ASPARAGUS BEETLE** — A strikingly coloured beetle that attacks young asparagus shoots in the spring. When the grubs appear they join in this work and later attack the foliage of the plants. Damage continues all the summer. Cut over beds at least once every 2 or 3 days. Leave short sections of row uncut; these will act as a trap and should be kept sprayed with arsenate of lead, 2 lbs. to 40 gallons of water to which has been added 2 lbs. of laundry soap. When cutting is finished, spray all plants with the above poison. Later in the fall, burn crop remnants and rubbish around beds to kill hibernating beetles.

6. **CARROT RUST FLY** — Very small and difficult to discover. Causes young carrots to wilt and die. Second generation continues to develop in the stored roots. Also attacks parsnips and celery. Delay planting main crop carrots until late in June. Treat

early carrots with corrosive sublimate dissolved in water at the rate of 1 oz. to 10 gallons of water. The liquid is poured along the rows in a liberal stream, the first application being made when the wild cherries come into bloom, with 1 or 2 further applications at intervals of a week.

7. **CABBAGE MAGGOT** — Whitish maggots that feed on the roots of cabbage, cauliflower, radish, etc., causing stunting and frequently death of the plants. Dissolve corrosive sublimate at the rate of 1 oz. to 10 gallons of water and, in the case of cabbage and cauliflower, pour about half a cupful around the stem and on the soil at the base of each plant. Make the first application when wild cherry is in bloom, followed by two further treatments at intervals of a week. For radish, apply as prescribed against carrot rust fly, but never when roots are nearly ready to use, as there is danger of poisoning.

8. **STRIPED CUCUMBER BEETLE** — Familiar striped beetles that attack the leaves of cucumbers, squash, pumpkins, etc. Dust with arsenate of lime 1 part to 20 parts of hydrated lime (by weight). Gypsum, if available, is said to be a better carrier than hydrated lime in the case of this insect. If Paris green is used, $\frac{1}{2}$ lb. to 20 lbs. of carrier is the quantity necessary.

9. **ONION MAGGOT** — Whitish maggots that bore into the lower part of the stems of onions, causing them to wilt and die. Use corrosive sublimate in the same manner as recommended for carrot rust fly. A $2\frac{1}{2}$ per cent Bordeaux-oil emulsion spray is also recommended.

ONION THRIPS — Very tiny insects that cause onions to become whitish and silvery, the leaves frequently wilting as though struck by blight. Burn or bury onion refuse in the fall and burn over headlands or grass areas in the spring that adjoin plantings of onions. Spray with strong nicotine sulphate, $\frac{1}{2}$ pint to 40 gallons of water in which 4 lbs. of laundry soap have been dissolved. Cover plants thoroughly and use good pressure to force spray into axils of the leaves. Repeat in a week or 10 days and make further applications, if necessary.

POTATO BEETLE — Too well known to need description. Spray with either arsenate of lead, 2 lbs., arsenate of lime $1\frac{1}{2}$ lbs., or Paris green $\frac{3}{4}$ lb. to 40 gallons of Bordeaux mixture. If poison is diluted in water, 3 lbs. of hydrated lime should be added when arsenate of lime or Paris green is used, to prevent burning. When adults ("hard shells") are numerous the amount of poison should be doubled. The best dust to use when fungous diseases are not a factor of importance, consists of 8 lbs. arsenate of lime and 92 lbs. of hydrated lime.

EUROPEAN CORN BORER — The full-grown caterpillar is about an inch in length, slightly brownish or pinkish in colour with brownish dots along either side. It tunnels through the plants of both sweet and field corn and causes heavy loss. Cut corn as low as possible in order to remove the bulk of the borers in the stalk; feed as much of the corn remnants as possible; uproot and burn, or otherwise destroy, all sweet corn stalks which cannot be ploughed or dug under; plough under deeply all infested stubble and refuse before June 1; dispose of all corn remnants brought to the surface by farm implements during spring operations and have a general clean up of farmyard and garden before June 1.

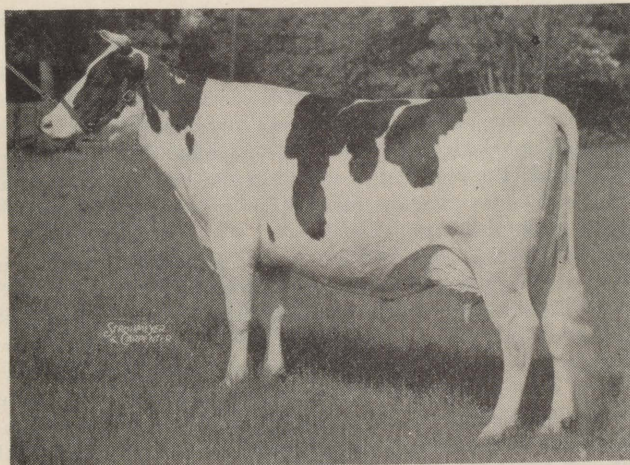
WHITE GRUB — Familiar fleshy, cream-coloured grubs with brown heads found just under the surface of the soil. They are the grubs of the common June beetles. Practise short crop rotations and absolute control of weeds. Early fall ploughing and frequent diskings are essential; if this practice is delayed too long, the grubs are too deep in the soil to be affected. Never plant strawberries on newly ploughed land.

A CHAMPION THAT IS A PRODUCER

The 1940 Reserve All-American three year old heifer and grand champion female at the 1940 Quebec Exhibition, Montvic Bonheur Pietje B. bred and owned by Mount Victoria Farms, Hudson Heights, Que. has now completed the second highest butterfat record ever made by a junior three year old Canadian Holstein in 305 days — 692 lb. fat from 14,994 lb. of 4.62% milk in three time milking. Last year she led the junior two year old class of the Holstein honor list with a 305 day record of 565 lb. fat from 12,873 lb. milk. The present holder of the junior three year old, 305 day Canadian fat record is another Mt. Victoria heifer, Montvic Baroness Hartog with 695 lb. fat from 15,828 lb. of 4.39% milk.

PIETJE B. is a daughter of Montvic Pathfinder who also sired the 1940 All-American three year old heifer and has many high record daughters including Montvic Bonheur Hartog, the North American junior four year old champion producer with 1,153 lb. fat from 24,248 lb. of 4.75% milk on three time milking. Her dam is Montvic Rag Apple Pietje, a famous Gold Medal daughter of Johanna Rag Apple Pabst with a three year old record of 1,043 lb. fat from 22,980 lb. of 4.54% milk, and she is also dam of herd sires used successfully by T. R. Dent, Woodstock, Ont. and Raymondale Farm, Vaudreuil, Que.

A half interest in the bull calf which Pietje B. dropped to complete the requirements for her 305 day record has been purchased by G. M. Clemons, Secretary of the Holstein-Friesian Association of Canada, Brantford, Ont. This bull was sired by Montvic Lochinvar. Her previous bull calf, a son of Raymondale Ideal Successor, is junior herd sire at Cedar Dale Stock Farms, Orono, Ont.



Montvic Bonheur Pietje B.

CHEESE SHIPMENTS CHECKED

The Dairy Products Board has ordered that no shipments of cheese in quantities greater than 50 pounds must be made from Eastern to Western Canada. This order was published in the *Canada Gazette*, April 10, 1941, and reads as follows:—

"That no person shall ship cheddar cheese (process cheese excluded) in quantities greater than 50 pounds, from the Provinces of Ontario, Quebec, New Brunswick, Nova Scotia, and Prince Edward Island to the Provinces of Manitoba, Saskatchewan, Alberta, and British Columbia, without authorization from the Dairy Products Board."

PREPARATION OF BORDEAUX MIXTURE

Mixtures of bluestone or copper sulphate and lime, commonly called Bordeaux mixtures, are recommended for the control of many plant diseases. A standard Bordeaux is the 4-6-40 mixture made with 4 lbs. of bluestone and 6 lbs. of hydrated lime in 40 gallons of water. Several other mixtures are in use as well.

The preparation of Bordeaux is very simple if finely ground bluestone and hydrated lime are used. The capacity of the spray tank must be known or determined. Weigh out the amount of bluestone and hydrated lime required to make one tank of the particular Bordeaux desired. Fill the spray tank one-quarter full of water and start the agitator running. Now wash the required amount of finely powdered bluestone, commercially designated as "snow" through the intake strainer until the tank is three-quarters full. Then add the fine hydrated lime through the strainer either dry, or as a paste made by mixing it with a little water in a pail. Add sufficient water to fill the tank and keep the agitator running for at least one minute before commencing to spray.

Ready-prepared Bordeaux powders of various strengths are on the market. These give good results when mixed with the proper amount of water according to instructions on the container. The dry Bordeaux mixtures are especially convenient when only small quantities of spray are required.

C.S.G.A. ANNUAL MEETING

The Annual Meeting of the Canadian Seed Growers Association will be held this year at Macdonald College, and the Oka Agricultural Institute, P.Q., on June 18 and 19.

It is expected that farmers who make the growing of registered crops their special activity from all parts of the Dominion will attend to discuss a war-time seed production program. A program is being prepared which will have the object of framing a reorganization that will more completely fit the present needs of Canada and seed growers. To take stock of conditions and arrange to make the necessary adjustments so that seed growers and the users of seed can look forward with hope to the new order of things after the war, is considered a matter of major importance.

The President of the C.S.G.A. is Captain F. L. Dickinson, Winnipeg, Man., and the Vice-President is Mr. E. L. Eaton, Upper Canard, N.S. The Head Office of the Association is in Ottawa and the Secretary-Treasurer is W. T. G. Wiener.

After-War Planning

Sir John Orr, Director of the Rowett Institute, has been telling an Edinburgh audience something about what plans should be made for offering the people a fuller life after the war. Mr. Churchill, he suggests, has given them the hint to plan for a better world after the war and Sir John Orr's conception of what should be aimed at is that everyone should have abundance of the right kind of food, every family should have a decent house, and the misery and frustration of unemployment should be abolished.

Scientific progress, he says truly, has given us real wealth to an almost inconceivable extent. Unfortunately in the last 20 years we had planned to put barriers upon the way to this new abundance and we had now to plan to remove these barriers so that the wealth would flow. We shall probably hear again the tales that were common at the end of the last war—that we had become so much poorer because of the costs of the war. Sir John Orr challenges that view with the assertion that real wealth consists of men willing to work and of materials available for the work to be done. If all the forces now engaged upon armaments were turned on to constructive work, the world, in his view, would take an immense leap forward. "A number of our financiers had seen the error of their ways when they regarded money as the only standard of power."

Now the interest to the farming community in all this "new angle" upon our economic power and scope for abundance is that if this fuller life for everyone is possible it opens up new outlooks for British and Empire agriculture. Instead of thinking in terms of production "ceilings" such as were set up under the Government's pre-war price-insurance scheme, our producers will have to think of a market capable of absorbing much greater outputs. This market-capacity is actual; it is being proved to-day. Demand has been expanding rapidly for such homely fare as potatoes and oatmeal, two of Scotland's leading outputs. This demand may be partly due to shortages of other kinds of foods. But if we could get down to the roots of the question we would find that when the masses are working hard and are off relief two factors assert themselves. The one factor is that their exertions give them an appetite for energy foods and the other is that they have the money in their pockets to satisfy this need. Hence the sales of both potatoes and oatmeal go up steadily. Yes, as Sir John Orr urges, we must move away for ever from the frustrations of unemployment even though some old notions of economics are upset on the way.

Canadian Wool in Sailors' Uniforms

Overcoat material made from Canadian wool is used for sailors' uniforms, and naturally it must be the very best that can be had. Government specifications for this cloth, which is a frieze made from fine medium and fine wool call for a strength test of 330 pounds in the weft and in the woof. Material made by one company from pure Canadian wool of the grades required had an official test of 602 pounds. This was a manufacturing record.

THIS YEAR — NEXT YEAR —

What you spray your trees with this year will either take money out of your pocket or put it in this year and next year.

KOLO Sprays control fungus diseases—yes—but they do it while leaves, fruit buds and the whole tree is developing thoroughly, building up for next year. KOLO Sprays are peculiarly kind to the tree. That's why they put money in your pocket.



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Let's Have a Picnic!

by Gwendolyn Taylor

WHEN MAY knocks at the door of June, the picnic season opens in most localities. This is the time of the year when the lure of warm sunshine and blue skies is too much to resist. So pack your basket and take a trip to the woods, the lake, the park, and it isn't even necessary to seek far distant pastures to enjoy the great outdoors.

It has been said that picnickers can be divided into three classes. There are those who rise early, make a box or basket lunch of sandwiches, salad, hard-cooked eggs, pickles, cookies, etc., then drive off to a favourite spot where they can eat their lunch beneath the sunny skies.

There are those who assemble some raw food, a frying pan, and coffee pot, and ride away to the shores of a lake or banks of a gurgling stream and who there experience a ravenous appetite in the atmosphere of frying bacon or broiling steak.

Again there are many who cook their entire meal in the kitchen, wrap up the roaster and pots full of food, or they may put the food in large vacuum jars, and dash away to eat dinner in some peaceful spot away from the hustle and bustle of everyday life.

It may be that you have no means of transportation to join the classes of picnickers mentioned above, or you may prefer to belong to the "stay-at-home" group. Sometimes we go afield in search of a likely picnic spot to get away from crowds and back to nature, and yet we may find both those assets in the privacy of our own backyard. An outdoor fireplace does surprising things to family habits and appetites. This fireplace need not be an expensive affair; in fact, it may be just a few stones with a grating over them to hold a coffee pot or frying pan. The building of such a project will undoubtedly interest the family. You may be able to gather enough stones or bricks around your place to construct it and with the addition of cement and sand you can have a very satisfactory fireplace. A picnic meal cooked over your fire will coax the most inactive armchair lounge to join you. Bacon and eggs, steaks, weiners, chops, hamburgers, are all good outdoor foods and are easily prepared. Any of these, accompanied by plenty of hot coffee, will furnish the main part of your meal.

But you do not even need a fireplace to enjoy a picnic supper at home — on a nice summer evening, push your table out on the porch or lawn, put on a bright colored cloth, and even if there is not much in the larder you'll be surprised how good the left-overs from the day before will taste. A tin of warmed up beans or spaghetti are eaten with relish.

Keep some permanent picnic equipment on hand for use at home or packed in a basket to be stowed in the car,

such as a paring knife, can opener, bottle opener, knives and forks, paper plates, napkins, paper cups and spoons.

Never be unprepared when the grownups or children beg to have a last minute picnic. Keep your pantry shelf well stocked with items suitable for sandwich fillings, as canned fish, potted meats; peanut butter; also pickles, olives, canned fruits and fruit juices.

Have a good time at your own picnic by letting your family or friends make their own sandwiches. Everyone likes to share in making the picnic a success. Just take along plenty of sliced bread, butter and suitable fillings or cold meat. Be sure to include something leafy and crisp as lettuce, celery or radishes; they add to your meal and lighten the heavier food.

On cool days, a casserole of scalloped potatoes, baked beans, etc., covered and well wrapped with several layers of newspaper, will remain warm for quite a while.

The luggage space in your car can be used as a serving table if it is large enough, or if you have a handy man in your family a board with collapsible legs can be fastened to the back of your car to give you extra space.

With the hope that you are convinced that it is time to give your family a real picnic treat, let's decide on a menu. May we suggest:

Fried Chicken
Mixed Green Salad
Rolls or Bread and Butter
Pickles
Fresh fruit Cookies Coffee

Here is a recipe for "Oven fried" Chicken:

1 chicken — $2\frac{1}{2}$ to $3\frac{1}{2}$ lbs.
flour for dredging
 $\frac{1}{3}$ cup butter or bacon dripping
 $1\frac{1}{2}$ teaspoons salt
 $\frac{1}{4}$ teaspoon pepper

Cut chicken into pieces suitable for serving. Wipe off. Roll or dip each piece in flour.

Heat fat until bubbly in heavy frying pan. Arrange chicken in pan, sprinkle with seasoning. Place frying pan in moderately hot oven 400°F and cook until well browned on under side. Turn and continue to cook until browned on the other side. — 1 to $1\frac{1}{2}$ hours in all. If chicken browns quickly, it may be necessary to cover it towards the end of the cooking period.

May these suggestions add to the pleasure of out-door dining wherever you enjoy it — in the backyard, garden, woods or beach.

Farmers' Account Book

Provides a convenient means of keeping accurate day-by-day records of costs and income from each of your farming operations. There are sections for your year-end inventory, live stock service records, crop yields, etc. You will find it a valuable help in the administration of your farm.

For copies of this free booklet address requests to The Royal Bank of Canada, Advertising Department, Head Office, Montreal.

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INFORMATION AND WHERE TO GET IT

Some Power Problems of the Farm, Bulletin No. 17, by J. MacGregor Smith, Department of Agricultural Engineering, University of Alberta, Edmonton, Alberta.—10 cents.

'Power Problems' explains the meaning of horse power as related to gasoline engines and power to pull farm implements. It gives information on pulley speeds of farm machines and the method of calculating the size of a pulley for machines such as threshers or grinders. Belt lacing is illustrated and diagrams are included to show how to arrange holes in a belt for lacing.

Formulae for Meal Mixtures, published by the Quebec Provincial Feed Board, and obtainable free from the Animal Husbandry Department of MacDonald College, Quebec.

This publication gives rule of thumb methods of feeding and detailed information on meal mixtures and their protein contents. The bulletin will prove very valuable to specialists in feeding cattle, calves, horses, hogs and other farm animals.

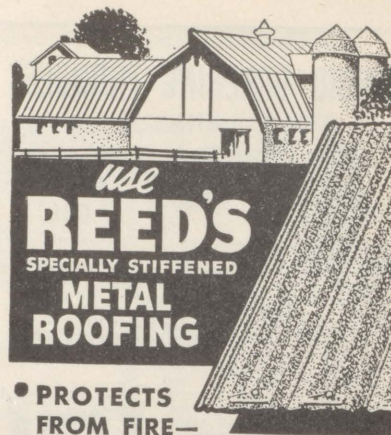
The soil chemist and the field crop specialist are able to determine the amount and kind of plant food needed for various crops on various soils and to recommend fertilizers that will produce profitable crops.

Good Recipes For Rainproof Whitewash

For the finishing spring touch there is nothing more effective or inexpensive than whitewash on basements and boundaries, fences, borders, garages, and other outbuildings. Persons are often deterred from using whitewash on buildings out of doors through fear of spoilage by rain, and there are many who do not care to use whitewash indoors because they consider it messy, one reason being that they do not really know how to mix the ingredients properly.

A waterproof whitewash for outdoor buildings is made up as follows: slake 62 pounds of quick lime in 12 gallons of hot water, and add two pounds of salt and one pound of sulphate of zinc dissolved in two gallons of water. To this add two gallons of skim-milk. An ounce of alum improves this wash but it is not essential. If the whitewash is required for metal surfaces subject to rust, the salt should be omitted.

The recipe recommended for the disinfectant whitewash is as follows—dissolve 50 pounds of lime in eight gallons of boiling water. To this add six gallons of hot water in which ten pounds of salt and one pound of alum have been dissolved. A can of lye is added to every 25 gallons of the mixture. A pound of cement to every three gallons is gradually added and stirred thorough-



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ly. The alum prevents the lime from rubbing off, the cement makes a creamy mixture easy to apply, and the lye is added as a disinfectant. A quart of creosol disinfectant to every eight gallons would serve the same purpose as the lye, but if a pure white wash is desired, the lye is preferable.

If a real snowy whiteness to whitewash is desired it can be obtained by adding a very small quantity of washing blue.

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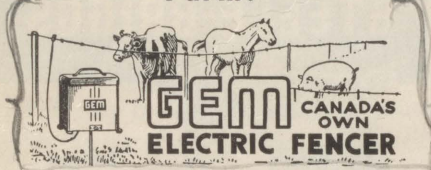
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FARM LANDS VALUE

The average value of occupied farm lands in Canada in 1940 was reported at \$24 an acre, a decrease of \$1 per acre from the 1939 value. Declines in land values were reported in Prince Edward Island, Nova Scotia, New Brunswick, Manitoba, and British Columbia. The greatest reduction occurred in New Brunswick and Nova Scotia where average land values were reported at \$5 an acre less than in 1939. Values remained the same as in 1939 in Quebec, Ontario, Saskatchewan, and Alberta.

THE QUESTION BOX

Have you any problems that are bothering you? This column is at your disposal. Address your questions to the Editor, Macdonald College, P.Q.

Question: How can mustard be controlled in my grain field? Does mustard in a field reduce the yield of grain to any great extent?

A. B. F.

Answer: Tests have shown that a heavy infestation of mustard in a field of oats will reduce the yield by 7 or 8 bushels per acre, or about 14% of the crop. The most effective means of controlling this weed is by the use of chemicals. A 3% solution of copper sulphate (bluestone) sprayed on at the rate of about 70 gallons to the acre will kill nearly if not all the mustard in a field without killing the grain. Cynamid dust gives just as good results when dusted at the rate of 100 pounds per acre. Cynamid is also an nitrogenous fertilizer, and when it is used it not only kills the mustard but fertilizes the crop as well.

The stand of mustard can be reduced to some extent by increasing the rate of seeding, and by harrowing when the grain is small, but control by these methods is by no means perfect.

Question: In the last dozen eggs I bought the skin which usually sticks to the inside of the shell came away from it, leaving the egg wrapped in a soft membrane. What causes this?

M. T.

Answer: The actual reason for the separation of the two shell membranes which line the inner side of the egg is not fully understood, although it is quite possible that in the average egg there may have been an air-cell at the side rather than at the larger end of the egg, or the air-cell was what is known as a "floating air-cell", movable to any position between the membranes. A "floating air-cell" is found in eggs which have been held for several days, where the membranes have tended to weaken and have partially separated. In this case, where the egg was broken without in-

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juring the inner membrane, it is quite possible that this condition was present, as the shell and outer membrane left the inner membrane intact and enclosing the contents of the egg.

We Make a Lot of Farm Machinery in Canada

The name of agricultural implements manufactured in Canada is legion. There are many kinds of ploughs, including horse and tractor mould board, single furrow and two or more furrow walking, single furrow sulky, two fur-

row or larger gang, horse and tractor-drawn discs of all types, breakers and others. Other tillage implements made in Canada are corn and other cultivators, spike-tooth, spring-tooth, and disc harrows, harrow parts and attachments, horse-drawn hoes, land rollers, packers, and soil pulverisers, one-way discs, harrow ploughs, tiller combines, scufflers, and weeders.

Of planting and harvesting machines, there are fertilizer sowers, press and wheel seed drills, corn planters, grain binders horse and tractor drawn, corn and cotton binders, threshers and reaper-thresher combines, thresher parts, pickups, harvester stackers, swathers, and push harvesters, while for haying the implements are abundant. These include hay loaders, dump, side, combination side rakes and tedders, horse and tractor-drawn mowers, hay carriers, hay forks, hay tedders and pressers.

However, that is only part of the story, for there are fanning mills and grain cleaners, grain grinders, hammer mills, barn and stable equipment, corn shellers, cream separators, ensilage and straw and stalk cutters, eveners, manure spreaders, potato diggers, pulpers and slicers, sleighs, hand and power sprays, wagons, wagon boxes, gears, wheelbarrows and many other implements used on the farm.

When operating farm machinery and other mechanical equipment a farmer should not spend his time learning how to be a plumber and a garageman in order to dispense with essential service offered by manufacturers, but should learn how to become a competent power farmer, able to avoid irritating, costly and vexatious breakdowns that arise from minor faults, neglect and other causes when operating farm equipment.

How does a plow eat "horsepower?" About 10% of the power applied to a plow is required to pull the plow along the ground, 38% is needed to turn the furrow over and 52% is used to cut the soil free on the side and the bottom of the furrow. That is why a plow share on a plow should be kept sharp.

Disc plows do *not* pull lighter than mold board plows! Although some farmers and some implement agents may say that disc plows are lighter to pull, it has been found by actual test that when considering the depth and the width of the cut (volume of soil moved) of a plow, disc plows have the same draft as standard mold board plows.

To Protect Shrubs From Cats and Dogs

Flowers and shrubs in gardens and porches can be protected against damage by cats and dogs by the simple use of a dilute nicotine sulphite spray. The spray is harmless but the smell is very offensive to these animals, even when applied so thinly that persons are unaware of its presence.

Nicotine sulphite may be bought at any seed or drug store and should be used at the rate of one-half teaspoonful to a gallon of water. The spray evaporates and should be renewed after rain. In ordinary weather, spraying every two weeks is sufficient.

Acct. No. 2151 GUELPH, ONT. March 5th 1940

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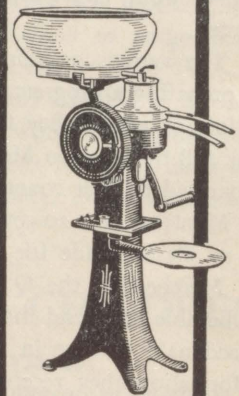
If your cream cheques aren't as large as they ought to be, don't blame your cows—and don't blame the creamery. A worn out or low-grade separator means small cream cheques.

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Get full information about the new Viking Separators from our local agent, or direct from us, 720-722 Notre Dame St. West, Montreal, Que.

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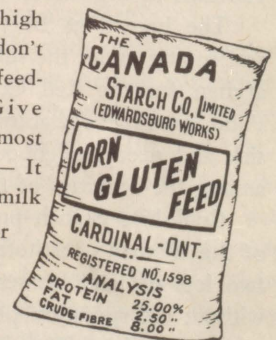
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THE WOMEN'S INSTITUTES PAGE

*A section devoted to the activities of the Quebec Institutes
and to matters of interest to them*

WOMEN'S INSTITUTE ACTIVITIES

by M. E. McCurdy

Practically all Branches are now embarked on another year of work, either under new leaders, or former ones re-elected.

The various organized counties take alphabetical turn in preparing a programme outline which the Branches may follow or not as they find it suitable to their needs. The task fell this year on Megantic County, and the programme submitted by that county to the Provincial Board Meeting in Montreal was accepted and distributed, and will serve as an elastic guide for Branch programmes.

Members of the Q. W. I. who were fortunate enough to be able to attend the Course for Rural Women held at Macdonald College in February have been passing on the information they received to the Branches in their own Counties.

The request for garden seeds for use in England by Mrs. Alfred Watt, President of the A. C. W. W. was taken up by several Branches including Dixville, Ayer's Cliff and Beebe, the latter Branch sending \$6.00 worth of seeds.

Summaries of work carried on by the Branches serve to illustrate the unceasing activity of the members. Canterbury held a contest in home beautifying, and donated prizes to the local School Fair, and in the schools. Over 160 cans of vegetables were sent overseas by this Branch.

The branch at Bury had demonstrations on cooking and ruging under the tuition of Miss Rettie. Quilts and an afghan for the Red Cross, donations to the Ambulance Fund, cans of vegetables supplied to be sent overseas, and sick and needy neighbours provided with necessities were among the activities of this Branch.

Cookshire Branch proved the wisdom of incorporation of the Women's Institutes which enabled the Branch to sell two lots of land, something they could never have done without incorporation privileges. Rummage, food and gift sales also assisted in replenishing the treasury of the Branch. Blankets ambulance donations, cases of canned tomatoes and a cash donation of \$10.00 to the Red Cross were features of the work of this Branch.

Belvidere Branch, in addition to knitting and sewing, sent boxes to local boys serving overseas and in the Active Service Corps in Canadian camps, gave donations to Sherbrooke Hospital, the Auxiliary Greek Relief Fund, Red Cross Campaign City Schools Milk Fund, Boy Scouts, Refugee Aid, and the National Institute for the Blind.

From Ascot Branch a total of 270 articles of sewing and 120 of knitting were sent to the Red Cross and \$5.00 donated to the War Service Fund. Seven quilts were made

for Red Cross uses since the last meeting, and a layette for a needy child in the neighbourhood. The members visited the Carnation Milk Plant, and the Asbestos industry was discussed at one of the meetings. Discussions on school problems and on current legislation and demonstrations on Home Economics were enjoyed.

Much of the activity of Brookbury Branch during the past year was devoted to Red Cross work. 110 pairs of socks and 145 garments and hospital supplies were provided for this purpose. Boxes of food and quilts for refugees were

(Continued on page 23)

To Conveners of Legislation, Q.W.I.

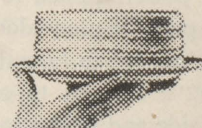
The time of our Annual Convention is fast approaching, and I would ask you to forward your reports — from Branch Convener to County Convener and then to me — as early as you conveniently can. If, during the past year, you have had no department of Legislation, I trust you have done something along that line, and if so, report it to me.

Again, in looking forward to the work of next year, although the department of Legislation will lose its identity as such, I trust that you will include this topic in, at least, one of your monthly programs. Now that Quebec women have obtained the franchise, great responsibility as well as great power has been placed on our hands, and we need to be informed on matters pertaining to good government. Also, with women being admitted to the practice of Law, and the likelihood of having a vote in Municipal affairs, we will have a grand place in the affairs of our Province, but we must have greatly increased knowledge, before we can adequately fill that place.

Mrs. J. A. ABERCROMBIE,

Conv. Legislation, Q.W.I.

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cakes and pastry you ever tasted*



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**"ROYAL HOUSEHOLD"
FLOUR**

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Canadian wheat
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IF IT'S "OGILVIE" — IT'S GOOD

Women's Institute Activities

(Continued from page 22)

sent overseas, and \$5.00 voted for the same purpose. Home needs were not neglected, school prizes, repairs to the Community Hall as well as Insurance, were paid out of the Branch treasury.

Melbourne Ridge Branch has a record of much work accomplished during the year. Knitted articles for the Red Cross numbered 160, and sewn ones 255. In addition to this \$10.00 were voted to the Red Cross, \$10.00 to the Salvation Army, \$2.25 to the Ambulance Fund, and a War Savings Certificate was purchased.

The Spitfire Fund received assistance from several Branches in Argenteuil County. Supplies for refugees were sent to the Red Cross. The Branch at Morin Heights has a work accomplished which would be hard to beat. Knitting 152 articles, sewing 28,949 articles; cutting, 274 articles; miscellaneous, 5 quilts and knitted afghans, 33 cans of fruit and vegetables.

Cleveland Branch stressed Red Cross work throughout the entire year, a total of 235 finished articles being the result. Cash donations were also given to the Red Cross.

East Clifton Branch reports varied activities. A teacher's reception, assistance to the local cemetery fund, donations to Church expenses, skating rink, and help for needy neighbours are among the things attempted and accomplished. Prizes were given in the schools, donations voted to the Red Cross, a share in the Ambulance Fund, and boxes sent overseas, all helped to make the year a busy and helpful one.

Scotstown Branch arranged a very enjoyable concert.

Brompton Branch sold 150 War Savings Stamps during the month of February. Dixville Branch completed a knitted blanket for overseas use, and received letters of thanks from boys to whom boxes has been sent.

As a friendly gesture Danville Branch sent a two-pound box of tea-bags to a Scottish Institute. This Branch reports \$12.00 expended in War Saving Stamps.

North Hatley Branch is offering a \$20.00 Scholarship in grade X of the Consolidated School again this year, as well as health prizes. Parcels were sent to local boys serving overseas, and \$20.00 expended in War Savings Stamps.

Dixville members completed a knitted blanket for refugees, and received letters of thanks from overseas boys to whom boxes had been sent. Knitting for local soldiers was done in Beebe Branch.

The formation of a Central School Board is a live topic in Stanstead County. An address by Dr. C. L. Brown, Member of the Council of Public Instruction given at the County meeting did much to make clear the advantage of such a measure.

Lochaber Branch celebrated St. Valentine's Day with a supper and social evening.

Each Convener in Beebe Branch has been responsible for the programme for one meeting during the year, this system resulting in many instructive papers and addresses. Donations were voted to both Sherbrooke Hospitals, two

cemeteries, Red Cross, Wales Home and Old Folk's Home in Sherbrooke. This Branch is to purchase a canning outfit, so that fruits and vegetables may be canned for Red Cross uses. Knitting for local soldiers occupied the time of the members at the meeting.

Among the tangible evidences of co-operation between Brompton Branch and the surrounding community has been the erection during the past year of a fine Community Hall. This Hall is to serve as a centre of social life as well as the headquarters of the Women's Institute, in Brompton. A splendid summary of Red Cross work was reported by the Convener, Miss Verna Hatch. Letters of congratulation and thanks were read to the members.

Richmond Branch planned many activities at its annual meeting, and gave out Red Cross work to the members.

Addresses, readings and contests formed a large share of the programmes in Pontiac County. These covered every department of W. I. work.

PARENTS AND CHILDREN

by Mary Avison

This column will welcome comments or questions on the problems it deals with, or on others that arise in every normal home.

A GARDEN OF HIS OWN

"May I plant some seeds too, Mummy?"

"Mother, can't I have a garden?"

"Can I have one all my own this year?"

From three years on we face such questions as these from our children in Springtime. We answer: "No dear, you're too little!" — "Perhaps, next year, maybe . . ." or gladly, "Yes, of course, you'll have a garden".

Is any child *too young* to help with mother's garden, to have a garden all his own, to grow through gardening? Surely not. It is only when we care more about the garden than the child that we deny him a share — till next year.

What a lot a little child learns about life and the world he lives in by planting and watering seeds and watching the tiny sprouts, the first leaves, the buds (if they live that long) and the flowers and insects! What a lot he learns also by forgetting to water the seedlings, by pulling them up and hopefully replanting them, by the quick careless step that destroys days of tender care. This is the best justification for a garden "all his own" to begin with. We adults are so concerned with results in our gardening and so upset if the fruits are not gathered. But to the child the process is far more interesting than the result; the things he learns along the way are so much more important than the final harvest — be it carrots or nasturtiums. And what these things are that he learns along the way, only those will really understand who watch with concern not the garden, but the child.

Let us give our children, all of them, opportunity to learn the lessons that a garden can teach!



DESIGNS FOR LEARNING

*"Travel opens the mind; but so does print;
and print is the cheapest mind opener
there is, and the best."*

— John Cotton Dana.

COMMUNITY SCHOOLS REPORT PART II — FINANCIAL STATEMENT

The finances so far have all been handled by the office. This plan made for simpler book-keeping and easier arrangements with speakers' expenses, etc. It is recommended, however, that each local school, hereafter, handle its own finances upon a plan agreed to by the local committee and the Service, the complete financial statement to be drawn up by the Adult Education Council.

It is important to note that the cost of operating the Service itself has not been included in this statement of expenses of the Schools. Not only for the period of the Schools, but for some weeks in advance the Service staff gave practically full time to the organization and planning of the Schools. Since the Adult Education Service is not a permanent institution, having, according to present plans, only 2½ years more to run, it is recommended that the local committees consider the matter of making the schools self-sufficient. Up to date, it has been expedient that the Service carry the burden of the work in organizing and operating the Schools. If the Schools are to be firmly rooted in the communities, then the total responsibility for them has to be undertaken by the local groups.

The total income of the Community Schools was \$891.52 of which the following is a breakdown:

School	Admission	9th Night	Total
Bury	\$162.03	\$24.75	\$186.78
Ayer's Cliff	130.88	9.50	140.38
Lennoxville	158.78	20.20	178.98
Richmond	270.58	57.20	327.78
Sale of Community School Buttons			10.50
First Aid Classes (for diplomas)			8.80
Balance from 1939			38.30

Grand Total: \$891.52

The expenditures were \$859.55, as follows:

Puplicity and Circulars	\$207.07
Communication & Transportation	179.43
Speakers and Guests	150.46
Visual Education	56.81
Instructors	55.28
Office and Operating Expenses	198.58
Miscellaneous	11.92
	\$859.55

Balance on hand \$31.97

HE DIED FIGHTING

(The tragic death by bombing in London of Sir Josiah Stamp with his wife and son, provide a fit occasion to remind ourselves of some of his best sayings. They bear the mark of the man, simple and direct, and of his faith in the democratic way of life.)

"Education has a three-fold purpose. It should fit us to get a living, to live a life, to mould a world. In other words, education is first for vocation, second for leisure, and third for citizenship — and in this order. For no good citizenship can come from those who have no pride and skill of vocation, and no mastery of self and life, and no one can make the best of leisure and character who is not disciplined in the routine and detailed pursuit of some worthy business or calling and alive with the struggle and achievement of it."

"First of all we have to get out of our heads that a balanced judgement necessarily means a luke-warm temperament, . . . an inability to take sides or be valiant in a cause. Wm. James said in one of his letters that we ought all to be ready to be savage in some cause or other. The difference between a good man and a bad man is the choice of the cause."

"The cardinal sin to-day is to lose confidence in developed intelligence. It has brought us so far it must see us through, but it will not do so unless there is behind it and all through it a spiritual impulse and a source of power outside ourselves. Civilization in its peril cannot be worse off if public opinion becomes enlightened, liberal and courageous. It may be saved by such education, but if it is not it will at least have *died fighting*."

ADULT EDUCATION NOTES

To wind up the Radio Forums, Community Meetings are to be held in many districts during the month of May. These include meetings for the counties of Sherbrooke, Stanstead, Compton, and Richmond, and for the Huntingdon-Chateaugay district, and that around Cowansville. Several meetings will likely also be held in the Ottawa Valley. Local problems as well as general agricultural ones are on the agenda.

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In the early part of June, a conference of all these groups will be held at the time of the agronomes' meeting at Macdonald College. This should prove to be an eventful one in the history of Quebec Agriculture.

UNDERSTANDING THE WHOLE COMMUNITY

by J. E. Milligan

(A student in 3rd. yr. Agriculture, and a prominent member of the Club whose work he describes.)

Everyone knows that the farmer, and those people other than farmers who live in rural districts have to face many different problems. A solution to some, at least, of these problems must be found before the prosperity and general well-being of these communities can be improved.

The contribution of trained agriculturalists to the solution of these general problems has always been limited by their lack of knowledge and experience in dealing with them.

In past years agricultural students did not get a great deal of help along this line. Excellent training and instruction were given in the principles to follow in feeding poultry, hogs and dairy cattle, on how to improve soil fertility, and increase crop production, but the student was left to work out his own methods of education and to discover from his own experience the nature of those problems on whose solution depended the success of his own efforts as a technical agriculturalist. Since the experience of each student was usually limited to one community it often took years for him to sort out the social problems which impeded his success.

Steps have now been taken to remedy this weakness in the formation of the Rural Problems Clubs of Macdonald College and its associated course in Extension Methods.

The club is made up of those students who are taking the Extension Methods course for credit and other students who are interested in this line of study.

The club is carried on as a study club. Each member has an opportunity on one or more occasions during the term to act as chairman in conducting a study group. This in itself is a very valuable experience.

The students who attend these club meetings are from homes in different parts of Eastern Canada. Each student is familiar with conditions as they exist in some one particular community. By having each club member describe conditions as they exist in his home community it was possible to get a fairly good general idea of the different agricultural districts of Eastern Canada.

At each meeting the club members take for consideration and discussion some problem or phase of a problem which is confronting the citizens of rural communities. The problem under consideration is discussed from every angle. Every club member usually takes part in the discussion. Some of the questions asked in connection with each problem brought up for discussion are: How does it affect the home community of each club member? What caused the problem to appear? What possible solutions are there? How can these solutions be brought about, etc. etc.

The subjects have been chosen with the idea of selecting those which taken together give a fairly good picture of the real conditions in some of our rural communities.

During the past year the topics discussed have included the following: Co-operation: How to improve rural health: How rural schools compare with city schools: The duties of local government: The recommendations of the Rowell-Sirois Commission.

The lectures in the associated Extension Methods course are given by different professors. Instruction is given on how to conduct public meetings, principles of public speaking, methods used in adult education, aim and organization of junior clubs, etc.

In brief, this course provides an opportunity for students to get some idea of rural conditions, and how these conditions might be improved. Also there is information provided in the lectures which, when combined with the knowledge gained from the other college studies will enable a student to develop a technique by which he can successfully carry on extension work.

WOMEN AND DEMOCRACY

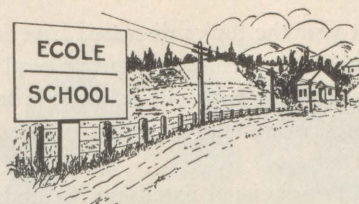
by Ileana Burns

"Women are the best propagandists, particularly with the youth, and within the circle of the family". This statement attributed to the German propaganda minister, Dr. Joseph Goebbels, refers, of course, to the spread of National Socialism in Germany. It remains true whatever political creed we have in mind. In the few countries where Democracy still survives, women are missing a valuable opportunity when they fail to act as propagandists for Democracy.

In our peace time Democracy, little attempt was made to mould public opinion along any particular line. Our leaders did not tell us first, last, and all the time that Democracy was the greatest form of government in the world. It is, of course, much more than a form of government, it is also a way of life, and the only free way of life. But because our leaders have not told us, and the whole world as well, that this is so, the leaders of the totalitarian states concluded that the democracies were weak and worn out. They believed that the democratic peoples did not value their freedom and would not try to defend it. That our failure to make Democracy strong when we had the opportunity is the reason why we must now defend it by force does not make our present trials any easier to bear.

Democracy does not work from the top down; it works from the bottom up. Unless every one of us who is a citizen in a democracy is willing to do his or her part in making Democracy successful, then it cannot be any stronger than the foundation on which it rests.

Women may help in the struggle to keep Democracy alive on the home front, while our men are defending it on the field of battle. As mothers in the homes, as teachers in day schools and Sunday schools, the instruction of the young is largely in the hands of women. Surely it is not too much to ask that women make a special effort to study and understand Democracy themselves, in order that they may pass along the understanding to the young.



SCHOOL PROBLEMS AND VIEWPOINTS



REFLECTIVE THINKING IN OUR SCHOOLS

by Henry Bowers

One basic assumption in a democracy is that its voters are stubbornly resistant to non-rational methods of influence, that they are reasonably competent to detect fallacious argument and to manipulate validly those data concerning public affairs that might be expected to be in possession of the layman. In each extension of the franchise this assumption must have been implicit.

It is natural to wonder to what extent the assumption is justified. To test its validity one might examine the nature of, and the degree of success attendant on, the appeals made by those whose aims, public or private, selfish or unselfish, are attainable only by influencing masses of the population. If, in the main, rational procedures are employed with fair success, the assumption is warranted. If, in the main, the dominant features of successful appeals are the fostering of prejudice, the fanning of antipathy, the excitation of self-interest, and all the repertory of tricks by which experts in mass-psychology prompt those whom they despise to fling up "their sweaty nightcaps", the assumption lacks support. If it is without support, democracy will wither before it comes to fruition.

It is not surprising that educationists are wondering if they have been adequately discharging their heavy responsibility in fitting citizens to appraise the methods by which their support is sought. Formerly, it was believed that daily contact with intelligent and educated teachers, together with the customary instruction in the traditional subjects of the secondary school curriculum would yield as a by-product the ability to distinguish between that which is intellectually honest and that which is an insult to the reason, to discriminate between the genuine and the spurious argument. That belief is becoming outworn. It is becoming outworn in spite of the substitution of the inductive-deductive technique for the lecture, of free discussion for authoritarian pronouncement, and of the ideal of mental activity for that of passive receptivity.

We suggest that a very significant contribution to training for citizenship will be made by our secondary schools when pupils are taught to regard with the deepest suspicion all efforts to arouse prejudice or to excite feeling when emotion should rightfully be excluded, to be aware of the tremendous leverage of words freighted with feeling, to recognize the important role of assumptions in arguments, to practice the detection of assumptions that are more or less concealed and to form the habit of questioning their credentials, to distinguish between observation and in-

ference, to be familiar with the commoner logical fallacies, to scrutinize closely their own proposals and those of others, to be willing to hold the judgment in suspense until the maximum of available data is at hand, to be open-minded without being credulous, to take pride in intellectual honesty and to demand it of others.

These are not intangibles realizable only in some educational Utopia. They are not educational frills. They are among the essentials for citizenship in a stable democracy. While not entirely overlooked, they have not yet received in our schools the attention they merit. If we do not know how they should be taught, it is now high time we did.

EDUCATION FOR HEALTH AND PHYSICAL DEVELOPMENT

For education as self-realization, health and physical development are primary objectives. The school is challenged to lay the foundation of personal habits and ideals which will result in a higher level of physical fitness throughout the whole population. The routine and activities of the school should establish a consciousness of health and safety and a personal sense of duty in relation to them.

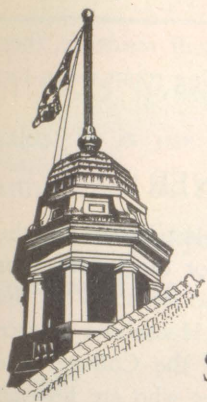
EDUCATION FOR MORAL CHARACTER

All education has a moral reference. Every acquisition of knowledge, every judgment, and every effort put forth contributes to forming the character. The school should lead to the formation of high ideals and to noble conduct, by providing opportunities for right thinking, right action, and the satisfaction that results therefrom. These measures should supersede the negative method of rigid and external discipline.

The development of the child's social nature is allied with his moral growth. As a counterpart to the process of adjustment to his environment, the pupil undergoes a progressive modification of his individual nature. He develops attitudes and outlooks which profoundly affect his character and personality. The life and work of the school should be so arranged and conducted as to bring the full socialization of each child.

EDUCATION IN CITIZENSHIP

The social function of education gives citizenship a place in school-life. The community interests of the school call for organization. All group activities are preliminary and basic to the undertakings of adult life. The way and manner of lessons, activities, and games transcend in social value the measurable items of subject-matter.



THE COLLEGE PAGE

News of the College — Staff, Students, Graduates

ANOTHER SESSION ENDS

On the 29th of this month the students whose pictures appear here will receive their degrees from McGill University and will take their places in the world to apply the knowledge they have received during their college years. It may be of interest at this point to look back and see what students do at Macdonald College and what they are taught.

There is little work in straight agriculture or household science during the first two years. Instead, this time is used to build up a solid foundation in science, that will help the students with the more advanced courses which come later. So we find in the curriculum introductory courses in Economics, English, Mathematics, Chemistry, Physics, Botany and Zoology predominating, and also general courses in Agriculture and in Household Science.

AGRICULTURE

During their third and fourth years, students in Agriculture may specialize in a number of different subjects. Some choose to do the major part of their work in Animal Husbandry. These men have courses in animal production; feeding, breeding, judging. They study the fundamentals of genetics, and apply that knowledge to a later course in animal breeding. A course in dairying teaches them the principles of butter and cheese making. They study animal physiology and physiological chemistry and learn the effect of diet on the animal system. A course in bacteriology prepares them for a study of microbial diseases. They take supporting courses in biochemistry, biophysics and economics and do a project on some phase of stock raising.

Other students prefer Agronomy. These men study crop production in just as much detail as the former students studied animal production. They learn the principles of growing hay, roots, corn and other crops; something of the nature and composition of soil, how to care for it and what crops are best adapted to the various soil types. They study the structure of plants, learn how they grow and how to identify them. The principles of plant breeding are studied and they learn how new and better varieties can be created. Courses in bacteriology, biochemistry and biophysics are also included in their training.

Another option which may be selected is Horticulture, and this gives the student an excellent training in the growing of vegetables, small fruits, and in orchard management. The protection of plants against insects and diseases is studied, and the students get to know something of the

structure and life processes of plants in general. Like the students in Agronomy, they also learn the principles of plant breeding.

The fourth of the so-called "outside" departments is that of Poultry, which offers a series of courses bearing on all phases of poultry production. These include breeding principles, judging, poultry management, nutrition, research and projects. In common with all senior students in any option, poultry specialists also study biochemistry and biophysics.

The Chemistry option allows a fairly wide choice of courses, according to the preference of the student for plant or for animal work. Any student who majors in chemistry can be assured of a thorough chemical education, one which will stand him in good stead in any position he may secure after graduation, or which will enable him to go on for graduate work in this subject in any University.

The application of Entomology and of Plant Pathology to agriculture is in the final analysis the same — the protection of crops against loss through insects in the first case, against disease in the second. These two options are offered for would-be specialists in crop protection, and the instruction given is intensive and thorough. The entomologists learn to identify and classify insects: they study life histories to find at what stage of its development the insect is most vulnerable. The plant pathologists study the organisms causing diseases in plants, make an intensive study of their habits, methods of growth and reproduction, and learn how to apply control measures. In both options strong courses in bacteriology, chemistry, physics and in technique are included.



B.Sc. (Agr.) '41.

In addition to the options described above, there are a number of others which may be combined with one of the foregoing. For example, Agronomy may be combined with Agricultural Engineering; Chemistry with Bacteriology; Animal Husbandry with Economics, Entomology with Parasitology. These combinations make it possible for a student to work out a programme of study which give him a wider choice of subjects than he would have in a single option.

And finally there are the two options of General Agriculture and General Biology, which may be selected by a man interested less in specialization than in a general study of agriculture or biology.

HOUSEHOLD SCIENCE

During the first two years of the B. H. S. Course the girls take almost exactly the same work as the agriculture students, but do a little less mathematics and physics, taking instead some introductory courses in art and in cooking. In the third and fourth years the emphasis is, naturally, on household science subjects, plus the necessary courses in biochemistry, physiological and food chemistry, biophysics and bacteriology. Included in the curriculum are such subjects as advanced cooking, fundamentals of nutrition, household and institution administration, diet therapy, clothing selection and construction, and the study of textiles and fabrics. In the last year of the course students who intend to take position as teachers of household science study education methods and do practice teaching; these girls receive certificates from the Quebec Department of Education authorizing them to teach in the Quebec schools. Extra work in dietetics is done by those more interested in positions as dietitians. Except for these differences, all students follow the same course of study.



B. H. S. '41.

All students have practical work during their course in a typical home and in a typical small hotel. The home-keeping practice is done in an eight-room apartment where for two weeks the girls are by turns housekeeper, cook,

maid and hostess. At Glenaladale, the staff residence, they prepare and serve meals in the staff dining room using the most modern kitchen equipment.

THE CLASS DINNER

The annual banquet on the 20th of last month was the final event on the social programme for the session. For the last two years at this banquet the members of the graduating classes in Agriculture and Household Science have been the guests of graduates of the College. The evening is organized by those graduates who are now on the college staff, and besides the graduating students, invited guests include members of the staff and former students who live within reach of Ste. Annes. The banquet serves a double purpose. For the graduating students it climaxes four years of study for a degree, and it is an opportunity for former students to return to the College, to meet old friends and to make new ones.

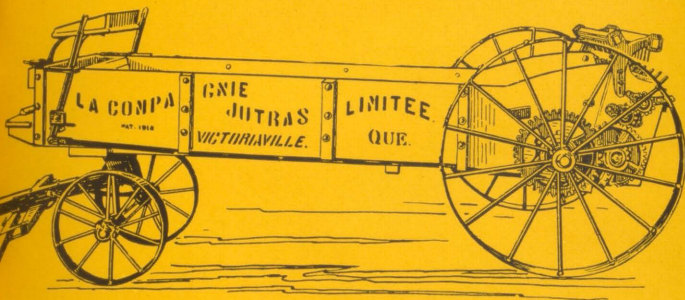
No class banquet would be complete without toasts. Miss Kathleen Cocks proposed the toast to the staff, which was responded to by Dr. Brittain. Toasts to the alumni and to the graduating classes were proposed by Allen James, President of the class of 1941, and by S. C. Hudson, '30. Roberta Scott and Edwin Robison made clever and amusing class prophets.

The main address of the evening was given by Mr. M. B. Davis, Dominion Horticulturist and a graduate of 1912, who responded to the toast to the alumni. He congratulated the graduating classes on their choice of profession, emphasizing that theirs would be careers of service and production rather than of exploitation. Mr. Davis pointed out that many graduates of Macdonald are holding responsible positions in the world, and that this year's graduates were going out to join a distinguished company.

The valedictory was given by H. J. Williams on behalf of the class of 1941. The feelings of the graduating classes toward Macdonald he summed up thus: "In the book of Proverbs it is written of an ideal mother, 'Her children rise up and call her blessed.' Not a word needs to be changed to permit this being said of Macdonald College." And the closing paragraphs of his address we quote in full. "And now we go out into a troubled world, some of us thinking and believing we can make it a better one. Some of us will put on the King's uniform; others will don the overalls of production. But no matter which class we fall into, we will all be in the attack. In the words of King George — 'This time we are all in the front line.'

"No matter where we go we will be soldiers, and when the war is over we will not be demobilized, because only then is the biggest task of all going to begin. The one ray of hope we have is our youth, and once we commence the building we can have it as we want it. The ideals and mental equipment that we have received at the College will allow us to make an excellent job."

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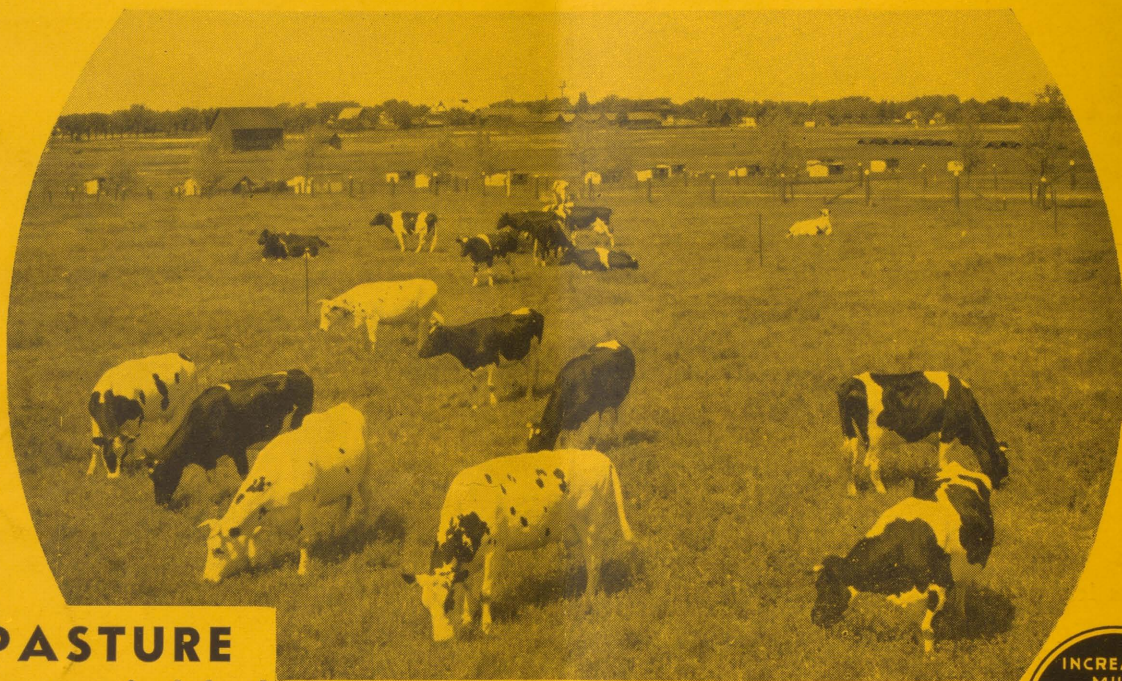
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Cheaper MILK PRODUCTION *through* **IMPROVED PASTURES**



PASTURE
the economical feed

GOOD PASTURE PROVIDES
THE MOST ECONOMICAL FEED FOR DAIRY COWS
PASTURE IS USUALLY AVAILABLE FOR LESS THAN HALF THE YEAR
— MAKE THE MOST OF IT

INCREASED
MILK
PRODUCTION
WILL
HELP FILL
GREAT BRITAIN'S
NEEDS

PASTURE MANAGEMENT

PASTURE, THE MOST ECONOMICAL CROP FOR MILK PRODUCTION, IS THE MOST NEGLECTED. PROPER TREATMENT WILL AT LEAST DOUBLE CARRYING CAPACITY

1. Permanent pastures with a thin weedy sward may be most economically improved by plowing (where possible), fertilizing and reseeded.
2. Where a better sward exists permanent pastures will respond to applications of commercial fertilizer or barnyard manure.
3. The most productive pastures are those provided for in the regular farm rotation.

YOUNG GRASS IS THE MOST NUTRITIOUS

GRAZE TO CAPACITY IN ORDER TO UTILIZE THE EARLY GROWTH
PROVIDE SUPPLEMENTARY FEED FOR USE WHEN PASTURES DRY UP

1. An annual crop of oats, rye, Sudan grass, millet, etc., singly or in mixture may be used for hay if not needed for pasture.
2. Aftermath following early-cut hay.
3. Green feed.
4. Corn or legume silage.

Consult your Provincial Department of Agriculture, Agricultural College, or nearest Dominion Experimental Farm, for information on pasture management

AGRICULTURAL SUPPLIES BOARD
Dominion Department of Agriculture, Ottawa
Honourable James G. Gardiner, Minister